THE

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THERAPEUTIC HINTS BASED UPON CERTAIN ARRESTED OR PERVERTED PHYSIOLOGICAL PROCESSES.

By J. A. McCORKLE, M.D.

The tendency of modern investigations is to build up a system of therapeutics based upon morbid anatomy; whereas the anatomical changes found at the post-mortem are but the sum total of disease. They give little or no clew to the successive steps between health and death. Structural disorders are not properly the disease ; they should be studied rather as the consequences of disease.

As therapeutists, therefore, we are interested not so much in pathological results as pathological processes. We seek for protopathic rather than deutopathic causes. Thus the changed cell; the disturbed secretion; the imperfectly formed crystal; the structural disorder, may be simply the expression of some widely extended influence, which it is the office of the physician to correct, if possible. I need but mention this sound rule of practice to render intelligible the facts and reasonings of my paper, based as they are upon certain morbid processes of the organism.

Physiological knowledge is essential for a proper therapeutical application. The more we study the physiological chemistry of the secretions and excretions, the better we are prepared to understand those changes which constitute departure from the normal—or disease, so-called.

In the study of some of the retrograde changes, we shall confine ourselves mainly to the nitrogenous elements of the body. In the regeneration and degeneration of tissue, oxygen plays the important part. It is the builder and destroyer, and, as found circulating in the blood, it is loosely combined, and very readily unites with carbon, hydrogen and nitrogen wherever found, and in this way it picks up the used up and useless particles, combines with them, and even at the last gives to the body one more service—the production of heat. Its use is well known and utilized. The foulest streams become pure and fit for use under its influence: oxidation of the organic material takes place, and the harmful products become harmless.

The same chemical changes take place in the body. The blood stream would become contaminated were it not for the ever-present oxygen. It serves its purpose here, and poisonous organic compounds are rendered harmless, and easy of elimination from the organism. The albuminoids contain C. H. N. O. and S.

These elements are found everywhere in the inorganic world, and to the inorganic they return as carbonic acid, ammonia, and water: the carbonic acid to the air, from whence it came; the ammonia and water to the earth, from whence they came. This is termed retrograde metamorphosis, and the products of these retrograde changes are again used in the constructive metamorphosis. The growing plant takes up through its tiny rootlets the water and ammonia from the earth; it inhales through the underside of its leaves the carbonic acid, and by the action of the sunlight, the carbon is deoxidized and woven into the structure of the plant, and thus contributes to its growth, while the oxygen is given back to the air, pure and good, ready for animal respiration, and for use in the animal economy. Within the body it is carried by the blood to the tissues, and there it unites with its chemical affinities, C. H. and N., and by such union heat is generated, this being one source of animal temperature. The food taken by some process, and until more definitely understood may be called the "vital process," is assimilated, changed, and, in the constructive metamorphosis, the high albuminoids are formed.

These high organic compounds are unstable, short-lived. They do their work quickly, and tend rapidly to form lower compounds, which change is readily effected by the ever-present oxygen in the blood. These, in turn, form lower and more stable compounds, which in their turn give place to others, until finally they reach the inorganic kingdom as carbonic acid, ammonia, and water—these being food for vegetables. And so the endless round goes on, ever-changing, yet the ultimate atoms always the same.

Thus the ingesta become vitalized, an integral part of a living organism. They live for a time, serve their purpose, and finally, through the process of oxidation, become useless, and, if retained, poison as surely as strychnia, corrosive sublimate, or the deadly night-shade. So long as the individual lives on the higher physiological plane, these changes go on without interruption; but let there be a break in the process, a stoppage in the retrograde, and there results pain, discomfort, *disease.*

It is well known that nitrogen in the form of albuminous food is a powerful stimulant to the nervous system. This stimulation manifests itself in mental bouyancy, cerebral activity, and increased physical work. It also helps to liberate the stored-up force which nature has kindly provided against emergencies. This reserve is the " balance-wheel to the animal machine," and by its aid life goes on smoothly and evenly.

The physiological action of nitrogenous foods should put us on our guard concerning their use in the sick-room ; for if a patient be fed on beef-tea, mutton-broth, or similar foods, at the outset of a severe illness, they tend to liberate the reserve too soon, and the patient becomes exhausted, with no power to carry him past " the dead point of danger " when the crisis comes.

In the degeneration of the albuminoids, they lose none of their stimulating properties ; and when the products of their retrograde occur in undue quantities in the blood, they fret and irritate the nerve-centres until they respond to the over-stimulation by irregular action or convulsion; or, overwhelmed with the poison, the nervous system ceases to respond, coma supervenes, and death speedily follows.

I herewith present some chemical formulæ as illustrative of this retrograde process. The following reactions have been taken from a recent and very excellent work, " Chemical Physiology and Pathology," by Victor C. Vaughan:

$$\begin{array}{ccc}
C_{72}H_{112}N_{18}SO_{22}+O & = & (\rule[0.5ex]{2cm}{0.4pt}) \\
\text{(Albumen)} & & \\
(\rule[0.5ex]{2cm}{0.4pt})+O & = & (\rule[0.5ex]{2cm}{0.4pt}) \\
(\rule[0.5ex]{1cm}{0.4pt}) & & \\
(\rule[0.5ex]{2cm}{0.4pt})+O & = & (\rule[0.5ex]{2cm}{0.4pt}) \\
(\rule[0.5ex]{1cm}{0.4pt}) & & \\
(\rule[0.5ex]{2cm}{0.4pt})+O & = & (\rule[0.5ex]{2cm}{0.4pt}) \\
(\rule[0.5ex]{1cm}{0.4pt}) & & \\
(\rule[0.5ex]{2cm}{0.4pt})+O & = & C_5H_5N_5O \\
 & & \text{(Guanin)} \\
C_5H_5N_5O+3O & = & C_5H_4N_4O+HNO_3 \\
\text{(Guanin)} & & \text{(Hypoxanthin)} \\
C_5H_4N_4O+O & = & C_5H_4N_4O_2 \\
\text{(Hypoxanthin)} & & \text{(Xanthin)}
\end{array}$$

$C_5H_4N_4O_2+O = C_5H_4N_4O_3$
(Xanthin) (Uric acid)
$C_5H_4N_4O_3+H_2O+3O = 2CH_4N_2O+3CO_2$
(Uric acid) (Urea)
$CH_4N_2O+2H_2O = (NH_4)_2CO_3$
Urea Ammonium carbonate.

INCOMPLETE OXIDATION.

$C_5H_4N_4O_3+3H_2O+2O = 2CH_4N_2O+H_2C_2O_4+CO_2$
(Uric acid) (Urea) (Oxalic acid)
$H_2C_2O_4+O = H_2O+2CO_2$
(Oxalic acid)

$2C_{57}H_{110}O_6+216O = 55H_2C_2O_4+4CO_2$. Incomplete.
(Stearin) (Oxalic acid)
$2C_{57}H_{110}O_6+326O = 114CO_2+110H_2O$. Complete.
(Stearin)

$C_6H_{10}O_5+9O = 3H_2C_2O_4+2H_2O$. Incomplete.
(Glycogen)
$C_6H_{10}O_5+12O = 6CO_2+5H_2O$. Complete.

Of guanin, hypoxanthin and xanthin, little need be said. Our knowledge of these substances is too meagre to be of material aid in therapeutics.

Uric acid is the next step in the retrograde, and a very important one, from an etiological standpoint. It is the result of a physiological process, and represents a small portion of the nitrogenous waste. It is a less oxidized compound than urea, and practically insoluble, and when produced in large amount poisons the system, leading to the disease known as lithemia. It has its origin in functional, as well as structural diseases of the liver, and in diseases of the heart and lungs.

The albuminous portion of the food taken is supposed to be broken up in the liver into glycogen, urea, uric acid, and other waste nitrogenous compounds. For the amount of albuminous food taken is far in excess of the amount required for tissue building : the excess is used as fuel and reserve.

Lithemia is a frequent concomitant of cardiac and respiratory diseases. It occurs whenever the circulation is markedly interfered with, especially on the venous side. The blood stagnates in the venous radicles, becomes loaded with carbonized and nitrogenous poisons, with little chance for oxidation; hence imperfect combustion of the waste material, and, as a result, an excess of uric acid.

Especial attention must here be given to the weak, feeble heart. Digitalis is the remedy, par excellence. It increases the force of the heart by energizing the systolic movement by lengthening the period of cardiac rest; it tightens up the arterioles and venous radicles, and brings the stagnant blood into the general circulation, in contact with air, and to a higher oxidation.

In diseases of the respiratory organs, whatever interferes with the arterilization of the blood tends to produce imperfectly oxidized products.

Another fruitful cause of lithemia is over indulgence in nitrogenous foods, with but little exercise. When the albuminous material is taken, with a liberal supply of alcohol, there is concurrence of action in this result.

Alcohol is a stimulant to digestion; more food enters the blood than is needed for tissue building or functional work: Indeed all food taken in excess of the bodily requirements becomes not only useless, but positively injurious. No matter how valuable the material may be for nutrition when required, the *unused* becomes just as harmful as the *used up* when retained in the blood.

Furthermore, this *unused* material must be eliminated by some of the emunctories, the nitrogenous preferably by the kidneys. If imperfectly oxidized, it leaves the organism partly as uric acid, and as this substance finds its way through the gland cells of the kidney, it irritates until a low grade of inflammatory action is established, which leads more or less rapidly to cirrhosis of the kidney. The treatment here is plainly manifest and needs no further comment.

The uric acid is sometimes eliminated by the skin, and here it does mischief. Many persons suffer from urticaria after certain indiscretions in diet. Dr. Tilbury Fox says that this is frequently due to the circulation of uric acid in the blood, and the intolerable itching may be explained by the oxidation of this material as it courses through the cutaneous capillaries, or becomes deposited in the tissues. It sometimes becomes almost unbearable, and as the patient scratches the skin it grows worse, for by so doing he removes the outside epitheal layer and brings the blood more nearly in contact with the air, thus favoring the burning process.

This action is somewhat similar to what occasionally happens after death, when the patient dies suddenly and the cutaneous capillaries of the face are well filled with blood. The blood becomes oxidized through the walls of the vessels, and the pallor of recent death gives place to the ruddy appearance of life—this being a source of great anxiety, and sometimes hope.

The physiological action of alcohol, already spoken of, leads to another injurious result. When used in health it interferes with the proper oxidation of the waste material by offering to the oxygen of the blood an easily burned carbo-hydrate. The alcohol is consumed, while the waste material escapes perfect combustion, and there results arrest in the retrograde. The relative amount of urea is diminished, while the products of imperfect oxidation are increased, especially uric acid.

This action of alcohol, harmful in health, leads to most excellent results when properly used in disease, especially those characterized by high temperature and rapid wasting of the tissues. In these cases it is valuable not only as a febrifuge and nerve stimulant, but by offering to the oxygen of the blood an easily burned carbo-hydrate, it protects the integrity of certain important structures, especially the heart muscle.

In typhoid fever the muscles are liable to undergo a form of fatty degeneration; the high albuminoids fall to lower and less vitalized compounds, and with this change heat is evolved. If the fat thus formed is oxidized, carbonic acid and water result; if not, the degeneration of the albumen is more marked; for the heat of the body will be maintained at the expense of either food or tissue. If the albuminoid tissue used as fuel be imperfectly burned, a *greater* amount will be required to produce a certain amount of heat; but if the oxidation be complete the *least possible* amount will be used.

In some cases the degeneration stops at fat; the oxidation goes no farther; the patient loses but little in weight. This is unfortunate; for the patient suffering with an acute febrile disease, who does not emaciate with more or less rapidity, is in a dangerous condition. It shows that the reserve fund of the body has been invested in bad stock, and cannot be called on and utilized in the hour of need : the patient is a "physiological bankrupt."

This condition is well illustrated in the acute febrile diseases occurring in drunkards, in the badly nourished, and in the prematurely old. The blood soon becomes loaded with effete matter, the nervous system is poisoned by the noxious material, and death speedily follows with but little wasting of the tissues. Nature was unable to use the stored-up material, and the patient dies in consequence.

In the fatty degeneration of albumen, the nitrogenous portion becomes so much waste, and, if not eliminated, rapidly poisons the system, as manifested by certain unfavorable nervous symptoms. Urea represents the great bulk of this waste, but a portion leaves the body as ammonia, uric acid, and other products of incomplete oxidation. These may find exit by way of the urine, diarrhea, sweat, expectoration, &c.

The blood, in severe cases of typhoid fever, and in well marked typhoid states, contains an excessive amount of ammonia, and for this reason the ammonia salts are contra-indicated in these cases. The general indications requiring arterial stimulants must be met with alcohol, digitalis, nux vomica, and similarly acting drugs.

Oxalic acid is the next change to the retrograde. This substance, although it contains no nitrogen, may occur from the splitting up of the albumenoids, as well as from starch and sugar. If the uric acid is imperfectly burned, urea, oxalic and carbonic acid result, which, being eliminated by the kidneys, irritate them, until organic mischief is established.

Is is generally believed by physiological chemists that oxalic acid is a product, to some extent, of physiological change, and only does harm when produced in excessive amounts. It is a well-known rapid poison, but not so in the quantities found in the organism, from the arrest of physiological processes. Here it is not more poisonous than some other waste organic matter, until it unites with lime and forms lime-oxalates. These minute insoluble crystals penetrate the tissues of the kidneys and bladder, and there act as foreign bodies, exciting disease.

Another danger of this arrested oxidation is, that the carbon, which should be eliminated by the lungs, the proper emunctories for much of this kind of waste, is eliminated by the kidneys in an insoluble and very objectionable form, and often with disastrous results to these organs.

Again, this substance may be introduced from without, either as an ingredient of food, or as a medicine. Many vegetables and fruits contain it in abundance; but usually it is oxidized and becomes CO_2 and H_2O, and but little finds its exit from the body by way of the kidneys.

The production of oxalic acid, from arrested oxidation in the body, has often been demonstrated by feeding animals with uric acid. If the animal be allowed plenty of fresh air and exercise, the uric acid will be converted wholly into urea; but if it be confined or obliged to breathe air impure or limited in quantity, the uric acid will form urea, oxalic and carbonic acid, and the urine will contain the oxalates.

In the light of this knowledge, we have no difficulty in understanding why oxalates appear in the urine as a concomitant of respiratory and cardiac diseases; for whatever interferes with the proper arterilization of the blood, or obstructs the flow of blood through the oxidizing area, will lead to imperfect oxidation in the retrograde.

The pathology is important in view of the treatment. That the latter may be successful, care and sound judgment are necessary. The general treatment *has* been nitro-muriatic acid, first, last and always. The mineral acids are useful as oxidizing agents, and are often indicated; but there are cases they cannot reach and cure, for the conditions of oxaluria are not always the same, and the remedies suitable in one case may be inappropriate in another.

In this disease, as in every other, the condition of the patient, time and mode of life, general health, the condition of the "tripod," all must be taken into account if we would prescribe intelligently and successfully.

If it depends upon disease of the respiratory organs, remove the cause and the symptoms will quickly disappear. If it depends upon a failing heart, sustain and strengthen this organ with that best of cardiac tonics, digitalis; add to the therapeutic action of this drug that of nux vomica, and we have a combination unequaled in cardiac failure.

Persons suffering from chronic gastric catarrh often have oxalates in the urine, and we not infrequently, by ill-advised directions, aid the disease rather than the patient. In these cases the food is not properly digested and assimilated. It enters the blood unfit for the requirements of the body, and much of it goes at once in the direction of waste. This waste material must be disposed of. It was imperfectly prepared for nutrition. It is often imperfectly prepared for elimination, for the patient usually takes but little exercise. The mental depression and nervous symptoms are well marked, due to the noxious material floating in the blood. The blood pressure is low; in short, the physiological processes are below the normal standard, and there results arrest in the retrograde.

For the dyspepsia, lime-water and milk are often prescribed. The lime-water is the very thing he ought not to take, for if the arrest occurs, let the offending material be eliminated in the least objectionable form, as oxalic acid, and not as the more harmful product, lime-oxalate. Here soda will answer every purpose, and is immeasurably better.

Thus we find a simple remedy like lime-water has its indications and contra-indications, the latter being sometimes the more important. Attention to the diet, especially the drinking water, and a careful study of the causation, should guide the therapy in oxaluria.

The chief function of the kidneys is to eliminate waste nitrogenous material; but under certain circumstances they will allow the passage of undecomposed albumen. This is of practical interest, for it is well known that albumen and hyaline casts occur in the urine under various conditions, and at times without any manifestations of actual disease.

It has been observed that after great and prolonged muscular exertion, attended with free secretion from the skin, albumen and casts appear in the urine voided soon after; whereas an examination made some time after gives no evidence of either albumen or casts, nor anything to indicate the great strain upon the muscular system, and likewise on the kidneys. Their presence in the urine may be explained as follows: When the sweat glands are freely active during prolonged muscular exertion, a large amount of water is drained away, thus diminishing the volume and increasing the density of the blood.

Again, muscles at rest manifest a neutral or alkaline reaction; during exercise the reaction becomes distinctly acid, and the urine shares the acidity. Furthermore, muscular exertion increases the blood pressure; hence the heart, acting with increased vigor, drives the concentrated blood with unusual force through the arterioles and venous radicles, especially through the capillary plexus in the Malpighian tufts. Here the pressure is higher than in the general circulation on account of the resistance offered by the second capillary network in front. Under this increased pressure a portion of the blood serum is transuded, and with it a small amount of intensely acid urine. Thus the albuminous transudate (very different from an albuminous exudate) is poured out under the most favorable condition for rapid coagulation, and the urine voided, shortly after the prolonged muscular strain, will show albumen and casts in more or less abundance.

During the period of rest following, the blood pressure falls to the normal, the volume of blood is quickly restored, the water is again secreted in normal quantities, the albumen and casts are washed out of the tubes, and in a short period not a trace of them can be found in the urine; and could we examine the kidneys at this time, no microscopic or chemical reagent would be able to detect any departure from the normal.

Here the presence of albumen in the urine is transient, and in the absence of other rational symptoms and physical signs possesses no clinical significance whatever.

Reference has already been made to the acidity of the urine. The secretion is normally acid, but may become excessively so, and thereby induce changes within the body which should only take place after voiding. One cause of alkaline urine is excessive acidity, a factor in disease too often overlooked in the treatment. It seems contradictory that excess of acid should render the urine alkaline. It may, however, be thus explained:

If the urine, when secreted by the kidneys, is intensely acid, it may irritate the walls of the bladder, which quickly pour out a large amount of mucus. This substance acts as a ferment, decomposing the urine, and forming ammonium carbonate, which renders the urine alkaline, and in turn gives rise to crystitis.

The proper treatment for the alkalinity and the evils that attend it is an alkaline course, not on the principle of "similia similibus," but upon that basic principle of all true therapeutics, good common sense.

Urea is the highest oxide known in the nitrogenous retrograde. Uræmia, the disease arising from the retention in the body of this and other waste products, has been recently so fully discussed in this Society, that I will not enter upon its consideration further than to say: when we find a number of theories offered in explanation of any phenomenon, it indicates a lack of positive knowledge as to the causation.

There is one more change in the retrograde which is of especial interest to the surgeon. I refer to the breaking up of the organic substance, urea, into the inorganic ammonium carbonate and water. All are aware of the difficulties attending the management of open wounds along the genito-urinary tract, especially those of a fistulous nature. The wound is apt to become covered with anaplastic material, and the healing process greatly retarded, if not actually prevented. The cause of this condition is apparent in view of the last change in the nitrogenous elements from the organic to the inorganic.

In an open wound over which the urine flows there must of necessity be a small amount of the excretion retained. No matter how small, there will be enough for decomposition, and the change will take place very rapidly, for the substance is placed under the most favorable conditions for rapid chemical decomposition, heat, air and moisture being present. The urea becomes rapidly decomposed, and the resulting ammonium compound is very irritating, for the reason that ammonium is a powerful base, and has a stronger affinity for the fatty acids of the tissues than for carbonic acid; hence the latter is liberated, and there is formed ammonium oleate, margarate and stearate, or a true soap. Necessarily this means death to the tissues; for when we take from a living organic compound any of its constituents, death of the part is the inevitable result.

This is a dangerous condition and must be promptly met by measures which will either prevent the formation of the destructive agent, or neutralize it when formed. To do this the agent used must possess certain therapeutic properties.

1st. The medicinal agent must be non-irritating.

2d. Ammonium must have a stronger affinity for the agent used than for either carbonic acid or the fatty acids of the tissues.

3d. If a chemical change does take place, the resulting compound of ammonium must be non-irritating.

Attention to cleanliness and a strict observance of these three general principles of treatment should guide our practice in the management of these cases.

A solution of benzoic acid possesses, in an eminent degree, all the essential therapeutic properties already mentioned. The acid solution in itself is non-irritating, and perhaps acts by its anti-fermentive properties, thus preventing the splitting up of urea; but should decomposition take place, the acid will unite with the ammonium and thus protect the tissues from the harmful product. The resulting compound, ammonium-benzoate, is non-irritating and harmless. In fact, by the chemical change a destructive agent is converted into a remedial one, possessing about the same anti-fermentive properties as the acid itself.

Boracic acid is another agent of equal, if not greater value. It is one of the most lasting anti-ferments we possess. No doubt in genito-urinary wounds it acts mainly as an anti-ferment, thus preventing the decomposition of urea, and by its gently stimulating properties promoting the healing process.

Under certain conditions boracic acid decomposes ammonium carbonate, and if the reaction takes place, only benefit can result. The ointment of the acid is an excellent remedy for erythematous eruptions found on the buttocks and thighs of children, whether due to neglect, or to the irritation of acid, or decomposed urine. For a full account of the therapeutic action of this remedy in surgery, I would refer the members of the Society to an excellent article in the "Boston Medical and Surgical Journal," Aug. 26, 1880, by Prof. Wm. Warren Greene. The observations of such an able surgeon and excellent therapeutist are justly entitled to our respect.

Other remedies may be used with advantage, but the benzoic and boracic acids are rational in theory, and eminently successful in practice.

In this review of some of the known changes brought about by physiological processes, and the diseases arising from their arrest or perversion, we have endeavored to show how a proper physiological and chemical knowledge may lead to their rational treatment. Here we have the successive steps in the physiological retrograde as far as known; but between albumen and the lowest oxide known to physiological chemists, there is a long distance, and many changes must take place ere these are reached.

Reasoning from the known to the unknown, may we not rationally infer that some of the diseases, the causes of which are involved in obscurity now, depend upon arrested or perverted metamorphoses in these initial and as yet unknown changes? Much of our knowledge upon the subject of regeneration and degeneration of tissue is still crude and imperfect, but I trust it is the dawning of a brighter day in medicine. When physiologists and physiological chemists shall have done their work more perfectly, and we have learned to look *within*, as well as *without* the body for causes of disease, then will empirical medicine give place to rational therapeutics, ignorance to knowledge, and vague theories to established facts. Then will much of the guess-work of to-day be supplanted by certainty, and in the brilliant light of positive knowledge, the now doubtful chapters on etiology will become resplendent with practical truth and the main contribution to therapeutical progress.

AUTHORITIES REFERRED TO.

Armor, Dr. S. G.—Didactic Lectures.
Bartholow, Dr. Robert.—Materia Medica and Therapeutics.
Carpenter, Dr. Wm. B.—Animal Physiology.
Fothergill, Dr. I. Milner.—Handbook of Treatment.
Gamgee, Dr. Arthur.—Physiological Chemistry of the Animal Body.
Harley, Dr. Geo.—The Urine and its Derangements.
Hermans, Dr. D. L.—Elements of Human Physiology.
Kingsett, Dr. Chas. T.—Animal Chemistry.
Murcherson, Dr. Chas.—Functional Derangements of the Liver.
Roberts.—Urinary and Renal Diseases.
Thudichum, Dr. I. L. W.—Annals of Chemical Medicine.
Tidy, Dr. Meymott.—Handbook of Modern Chemistry—Inorganic and Organic.
Vaughan, Dr. Victor C.—Chemical Physiology and Pathology.
Wagner, Dr. Ernest.—Manual of General Pathology.
Vogel & Neubauer.—Analysis of Urine.

DISCUSSION.

Dr. S. G. Armor desired to express his admiration for the very interesting paper presented. He had seldom listened to a paper presented to this Society with more satisfaction—one which contained more suggestive thought and fact in their wide range of pathological bearing. In this respect the paper was of great practical value.

One point, however, struck him with peculiar force. We have many writers and theorists who have expressed their views as to the various chemical changes which take place in the human organism. He had not much faith in purely "chemical doctors." They are often purely speculative, and rarely practical. The general facts and reasonings of this paper have, as will be seen, a physiological basis. They are simple disturbed processes of life. They point directly to morbid physiology as the basis of all disease. The speaker alluded to his favorite definition of disease: All morbid action consists in disturbed conditions of life. These disturbed conditions of life produce disturbed states of the system, and these disturbed conditions of nutritive action have been admirably presented. If the conditions of life all co-exist in their normal condition, health would be inevitable—at least health so far as we know anything about it in our present state of existence.

An interesting fact presented in the paper is that of defective oxidation of the blood. This is an ever present and fruitful source of disease, rarely considered in its wide range of pathological bearing. The paper has admirably brought out the relations of the red corpuscles to the vital operations of the organism. If the physiological processes of the red corpuscles, as carriers of oxygen to the solid tissues of the body, are disturbed in the slightest degree, the whole process of vital action must be changed. The disturbance of this oxidizing process has been presented with great clearness in the paper which we have heard. The paper is rich in its suggestions and fruitful in its practical bearings. He simply desired, in a general way, to express his admiration for a paper which had been so carefully prepared, and which abounded in hints and suggestions so valuable to the general practitioner. It contains in small space facts and reasonings which might be elaborated into a volume.

THE MANAGEMENT OF THE PERINEUM DURING LABOR, AND THE IMMEDIATE TREATMENT OF LACERATIONS.

BY F. H. STUART, M.D.

The subject of this paper is not a new one, for it falls in the line of experience of every general practitioner; nor can I expect to offer anything that is original. The subject itself and its importance is what I hope will challenge your attention.

The importance one attaches to it will be in direct proportion to the attention bestowed upon it. Its consideration involves a study of the anatomy of the perineum; its functions, in the non-puerperal as well as the puerperal state; the causes of its rupture; its consequences; the means, if any, of guarding against its rupture; the treatment of the laceration; the objects and methods of immediate treatment; and the after-care of the patient.

The anatomy of the female perineum is but little understood. The male perineum has received exclusive study until within a few years. The works upon anatomy, even the elaborate manuals for dissection which have been recently revised and re-issued, Holden & Ellis, give no distinct description, while the work of Gray also does nothing more than refer to the description of the male. To Dr. Savage, of London, is due the credit of first giving a full and careful study and illustration of the anatomy of the female perineum, while Dr. Thomas, of New York, has more recently developed its anatomy, physiology and pathology, in an exceedingly interesting and valuable paper read last year before the New York Academy of Medicine, and the Anatomical and Surgical Society of Brooklyn, which paper is reproduced in the last edition of his work upon Diseases of Women, constituting Chapter IX. of that book. Dr. Mathews Duncan has given a careful description of the anatomy of the vulva, and makes important the distinction between lacerations of the vaginal orifice from those of the perineum.

In the upper part of the female pelvis the rectum and vagina lie almost in opposition, only being separated by loose areolar tissue. Lower in the pelvis they are separated, the rectum inclining backwards towards the coccyx, and the vagina forwards towards the lower border of the symphysis pubis. Between them is the *perineal body*. Says Savage: "The perineal body is a structure peculiar to the female," and is thus described by him: "Midway between the posterior vulvar commissure and the anus those perineal structures which meet there" [*i. e.*: the superficial sphincter ani, the superficial transversus perinei, the bulbo-cavernosus or sphincter vaginal muscles, and some fibers of the ischio-cocygens and of the levator ani muscles, with their inclosing fascia,] "become, as it were, fused together by a great accession of elastic tissue, without altogether losing their identity. The result is a *body* or *structure* at once highly elastic or resistent. The integrity of the female perineum depends entirely on this perineal body."

The perineal body, having relation with the anterior wall of the rectum and the posterior wall of the vagina, its function is directly one of support to these structures. Less directly it supports the uterus and the bladder in proper place. Composed as it is of muscular and elastic tissue, its function in supporting the pelvic viscera in proper relation with one another in all the variations of these viscera, in size and weight, can hardly be over-estimated; yet this important structure is so little regarded by those who teach, as well as those who practice obstetrics, that we find in our text books no description of it. Physicians habitually do not examine it after labor, to see if its integrity has been impaired, and neglect to do anything to repair it, saying they "have seen it ruptured many times and yet have never heard anything of it afterwards." The obstetrician may not hear of it afterwards, but the gynæcologist's work increases by reason of this neglect. The most eminent gynæcologist of this country, in the paper before referred to, says: "It is no exaggeration to say that a very large proportion of female diseases take their origin in the mismanagement of the lying-in-chamber. If this be so—and no gynæcologist will deny it—to the obstetrician the importance of the perineum in this connection cannot be exaggerated. . . . To an imperfect comprehension of the anatomy and functions of the perineum I attribute, in great degree, the impression entertained by many practitioners, that, in spite of all that is said, its rupture, so long as it does not involve the anal sphincter, is a matter of little moment."—(Thomas: Diseases of Women, 5th Ed., p. 165.)

In labor, after the full dilatation of the os uteri, the fœtal head rests upon the floor of the pelvis. This is formed by the muscles of the perineum constituting, as before described, the perineal body. "*The completion of the last stage of parturition is possible only through the adequate dilatation or rupture of the perineal body.* The perineal septum is elastic, like the remainder of the vagina, but the resistance of the bilateral ligamentous structure, resulting from the union of the perineal aponeuroses along the lower edge of the septum, throws the strain almost entirely *on the perineal* *body.* . . . The fœtal head passes through a longitudinal rima, bounded by two lines of parallel muscular fibres, extending from the pubis to the coccyx. The length of these fibres, and their arrangement into bundles separable laterally, allows of a preliminary globular expansion over the presentation; but its final covering is *solely the perineal body enormously distended and attenuated in proportion.*"—(Savage: Am. Ed., p. 11.)

Such being the condition of the perineum in labor, its frequent laceration is not surprising. In many cases it may be said that laceration is almost *inevitable.* In other words, there are predisposing causes, and, in some conditions, they *invariably* operate. Of these I may mention faulty condition of the pelvis. The tuberosities of the ischia may be abnormally approximated. As a result, there will be an unusually acute subpubic angle. This requires the head to press more upon the perineum, as it passes forwards under the arch of the pubis. Rupture will occur in cases where the vulva orifice is unusually small or is undilatable. A very precipitate labor will usually be attended with laceration of the perineum, from there not being time for the presenting part to dilate an otherwise distensible orifice. On the other hand, a lingering labor may destroy the dilatability of the perineal structures. Some perinea seem to be naturally unusually friable, and break down before the distending body. A malposition or presentation may be the cause. In face presentations or occipito-posterior positions, where the labor is completed without natural or artificial rotation of the occiput forwards, the perineum is very apt to be lacerated. The use of the forceps is often charged with causing laceration. It is my opinion that such a charge is unjust. If *properly used* the *forceps* will never lacerate a perineum. If laceration occurs, it was either inevitable, from one of the causes above enumerated, or the delivery has been injudiciously precipitated. If the forceps were always removed as soon as the perineum begins to stretch, and the delivery completed either by uterine contraction alone, or in combination with enucleation by the fingers in the rectum or pressure upon the fundus uteri, there would not occur a laceration in cases artificially delivered. Indeed, I am very strongly of the opinion that the judicious use of the forceps, by compelling the head to press closely under the arch of the pubis, or by controlling the rapidity of descent of the head, and thus facilitating the *gradual* dilatation of the perineum, may even prevent a laceration that would otherwise be inevitable.

To improper support as a cause of laceration I will refer when I speak of supporting the perineum during parturition.

The consequences of laceration of the perineum are much greater than are usually thought of. They may be entirely local, leading to prolapse of the anterior wall of the rectum, or of the posterior wall of the bladder.

As, indirectly, the perineal body serves to support the uterus, its removal, by division, *favors*, though it may not cause, prolapsus of the uterus. It also interferes with the involution of the uterus and vagina. Besides the local results I have just referred to, Prof. Thomas (op. cit. p. 167) gives ten others which immediately or remotely arise from the occurrence of this accident. He says: "This array may appear unnecessarily formidable, but there is not one pathological condition mentioned which practical men will feel inclined to question the occurrence of as a consequence of puerperal laceration of the perineal body."

I do not wish to seem to go outside of my subject by referring to the remote consequences of such lacerations. But the gravity of any injury can only be appreciated by considering its remote results—remote as regards both time and *locus*. The effect of even a slight laceration upon the nervous system is observed by gynæcologists of extensive experience. Dr. Emmet (Principles and Practice of Gynæcology, 2d ed., p. 385) says that "a laceration of the perineum is sometimes accompanied by a general irritability, which cannot be traced to any other cause, and is only relieved when it is restored. I have known of several instances in which the existence of scars on the perineum had so much effect upon the nervous system as to entirely change the disposition of the women; and yet they were not conscious of any local difficulty." His further remarks upon this subject are of great interest, but I must not quote them here. The local consequences are due both to loss of tissue and to perversion of action of the perineal muscles from alteration of points or lines of action. The general or remote consequences we may not so readily explain, though they are none the less real.

In a valuable paper upon "The Simpler Varieties of Perineal Laceration—their Prevalence, Consequences, and the Importance of Radical Treatment," published in Vol. II. of the Gynæcological Transactions, Dr. T. A. Reamy, of Cincinnati, makes this pertinent remark: "I think we may safely affirm that too much has been expected [from the let-alone treatment], and that the consequences of nature's failure here more fully to effect restoration have been too little appreciated by the profession." In 600 cases of laceration that did not involve the anal sphincter, Dr. Reamy found that "*in every instance cicatricial tissue marked the pathway of union*, and in no instance had the parts assumed their former relations and forms." I consider the conclusions arrived at by Dr. Reamy from his extensive study of "slight lacerations" of so much importance that I quote them entire:

"1. Slight perineal lacerations play a more important *rôle* in the induction of bodily and mental disease than is generally recognized."

"2. Since a perfect cure in any case can only be effected by surgical closure of the torn edges, *immediate or remote*, the same rules should apply to the management of simple cases, as to the severe ones."

"3. It would follow that simple cases ought generally to be operated on at the time of the accident, since this is accepted as proper for severe cases."

"4. Cases of perineal laceration in the first and second degree" [he adopts the classification of Prof. Thomas] "which are not closed by suture primarily, should be operated upon as soon as any of the symptoms, physical or mental, traceable to the deformity arise."

"This proposition would bring to an operation many cases of perineal lacerations in every community, which are not now even recognized as existing."

The importance of rupture of the perineum, judged by its immediate and remote results, being thus certainly established, the question of prophylaxis assumes a like importance. The existence or occurrence of the injury was clearly recognized by the ancients, as is conclusively shown by Dr. Goodell, in his learned article upon the subject (American Journal of Medical Sciences, January, '71); yet they proposed no method of "supporting the perineum" with a view of preventing the accident. The means used were the warm bath, emollient applications, and artificial dilatation of the parts. Various medicines, reputed to give easy labors, were administered. The idea of supporting the perineum was introduced (as shown by the above mentioned article), about a century ago, by Hamilton, Foster and Dease, though the former, in a later edition of his Work, speaks of supporting the perineum as "a doubtful and hazardous expedient." But to Puzos, whose work was published in 1759, though it was written in 1747, is accorded the credit of having first suggested the idea of supporting the perineum.

Among the methods of avoiding laceration that have been recommended, may be mentioned the following: The perineum was pressed back towards the coccyx in the intervals of pain; the perineum was dilated circularly; the fingers were introduced into the rectum to push the head forwards towards the pubis; the fingers were introduced into the rectum to push back the tips of the coccyx; or the hand was introduced into the vagina and "pressed firmly with the palm upon all the bones of the coccyx"; the perineum was pushed back over the presenting part; the labia were separated and pushed backwards; the perineum was drawn forwards and extended; the vulva orifice was surrounded by the thumbs and forefingers and so its circumference stretched; the head was pressed upon to prevent the too rapid progress of the labor; the perineum itself was pressed upon firmly with the hand with a like object.

In regard to "support of the perineum," properly so called, there have been various methods, and all have had strenuous advocates. I will only mention some of them: The hand is applied to the edge to form, as it were, "an artificial perineum"; the perineum is supported in the hollow of the hand: a folded napkin is applied to the perineum (This last is a common and favorite method now in use, and is most pernicious.); the palm of the naked hand is applied either longitudinally or transversely upon the whole perineum; pressure directly from behind forwards is made upon the head to favor extension; pressure is made "in the axis of the inferior strait to prevent this very extension." (See a full *resumé* of this subject by Dr. Goodell in the article referred to above.) A very important fact was first clearly brought out by Tyler Smith in regard to the effect of pressure upon the perineum in exciting reflex action and so precipitating labor. This effect is a matter of common observation (often made use of in lingering labors), and it is strange that it was so long overlooked. From the time of the publication of this observation may be dated the modern practice in regard to supporting the perineum. This practice is *not to touch the perineum at all* during labor.*

Tyler Smith (Lectures on Obstetrics, Am. Ed., p. 366,) says: "If we prevent the rapid passage of the head, we do more to prevent laceration than can be accomplished by the most careful pressure" [on the perineum."]

It is here important to consider the mechanics of labor at this stage. It is unlike an obstruction at the brim of the pelvis. There, the fœtal head is moulded to pass the unyielding obstruction. Here, the fœtal head is, essentially, the unyielding body, and the soft parts of the mother must dilate or give way. The time laceration usually takes place is after the occiput has become fixed under the arch of the pubis. The sub-occipital region of the fœtal head is the centre of rotation. The vertex, the anterior fontanelle, and the forehead, successively sweep over the perineum. Every one who has carefully watched the process has seen that the two first points pass from the grasp of the vulva orifice without rupturing it, and that it is when the forehead passes it that the laceration takes place. (Sometimes a central laceration is made earlier by the forehead.) If we measure the diameters and circumferences of the fœtal head at these three points, we shall see how this is so. Given in a tabular form (taken from Duncan's Papers on the Female Perineum) they are:

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*This statement as to the modern practice should be qualified, for it is not universally accepted. Excellent and able obstetricians still teach that the perineum should be supported. Its most eminent advocate is Dr. Mathews Duncan. If the term "support" were changed to "relaxation" perhaps all would unite as to what is to be aimed at, though they would still dispute as to the means. I think it would open the way to a better practice than now obtains.

Sub-occipito-vertical diameter,	3½ inches,	circumference,	11¼ inches.
" " bregmatic "	4 "	"	12½ "
" " frontal "	4½ "	"	12¾ "

If the head could come through the vulvar orifice in the direction of its longest, or occipito-mental, diameter, lacerations would perhaps rarely occur. But this is impossible, owing to its connection with the neck, which does not permit sufficient flexion for this purpose. But these facts give us a basis or rule to guide in the management of this stage of labor. It is to *so make pressure upon the head, as it advances, as to compel it to pass the vulvar orifice with as little extension as possible*, and also to allow extension to take place very *gradually* and *regularly*, *i. e.*, without suddenness.

Schroeder lays stress upon the position of the patient. He contends that the best position is upon the side, with the body bent forwards. In cases where the head is large and the laceration seems inevitable, he advises lateral incisions in the direction of the tuberosities of the ischia in order to secure sufficient dilatation of the vulva to permit the head to pass.

The most practical and important suggestion in regard to the subject of prevention is that of Dr. Goodell, which I give in his own words: "When the perineum is very rigid I relax it by hooking up and pulling forward the sphincter ani, with two fingers passed into the rectum, while, with the thumb of the same hand, I make the needful restraining pressure upon the head. For this method," he continues, "I claim the following advantages: (*a*) By pulling up the sphincter ani towards the pubis, not only is nature imitated, which always dilates the anal orifice, but the perineum is brought forward without direct pressure, and its dilatation is diffused over its whole surface, causing a corresponding relaxation of the strain on the posterior commissure in the line of its raphé. In addition, its muscular fibres are crowded up to, and consequently strengthen, the line of greatest tension—just as a prudent general hurries up reinforcements to the point of attack. (*b*) The same force which dilates the sphincter ani compels the occiput to hug the pubis and favors extension, especially if the fingers in the rectum are hooked over the prominences of the fœtal face, or over the chin. (*c*) This is not liable to sudden interruption from the movements of the woman. (*d*) The thumb of the same hand, together, if needful, with the fingers of the free hand, can, by direct pressure upon the presenting part, restrain its too rapid advance, without exciting that reflex uterine action which is so frequently evoked by the irritation of contact with the perineum. (*e*) The circulation of blood remains free; the nerves are not benumbed by a double pressure, viz., by that of the hand and that of the presenting part; and the perineum, therefore, stays in its natural condition, that of a living, elastic and sentient tissue." (Lessons in Gynæcology, 2d Ed. p. 95.)

In cases of rigidity of the perineum great benefit is derived from the use of anæsthetics. But it is necessary to administer them (chloroform by preference) to nearly or quite the surgical degree, particularly at the moment of greatest distension. If not, and the sensibility is only benumbed, there is greater danger of laceration than if not used at all, for the patient, not having self-control, will suddenly expel the presenting part, producing extensive rupture.

It is asked How frequently does laceration occur? This varies with every one's practice. This would be because of different modes of managing the perineum. One excellent English obstetrician said that it occurred 75 times in 112 cases of primipara. If one and another practitioner were questioned on this point, the testimony would be very contradictory. Why? Chiefly because of the methods of examining. Many never examine their patients at all to see whether there has been any laceration. Others examine by the touch alone, and, unless it is done very carefully, and the laceration of considerable extent, will pronounce it unruptured. Others, still, will examine after the head is born, while waiting for the shoulders to advance. The shoulders come forward precipitately, or, being delayed, are hastened by hooking the finger into the axilla, and so a laceration is produced by the sharp, unsymmetrical prominence of the shoulders, suddenly distending the benumbed perineum. Now, in the light of the importance of the subject, which is made manifest by the practice of gynæcology, and its showing of the evil consequences, as well as the *frequency* of such lacerations, is it not time that an uniformity of practice should obtain? Should there not be this definite rule observed in *every* case?—*Examine the patient by sight as well as touch to see whether there is or is not laceration of any portion of the vulva or perineum.* There is no other way of discovering such injuries. The patient suffers very little pain after confinement, or else it is quite slight and far out of proportion to the extent of the injury. Patients who have been torn entirely through into the rectum, have been unconscious of it until they discovered, after getting up, that something was wrong, because the fœces escaped. On this subject of examination of patients, Dr. Goodell (op. cit.) says: "The prudery of obstetric teachers has, I am sure, been the cause of many undiscovered, and consequently uncured, lacerations. But why should a false delicacy interfere with the freedom of manipulation at a time when a woman's future health and happiness lie at stake, especially since her organs are then no longer *sexual*, in the common acceptation of the term, but *parturient*.

The importance of an uniform habit of examination is so well illustrated by a case that occurred recently in the obstetrical ward of the Long Island College Hospital that I will here relate it: On making my visit, about two hours after the patient was delivered, I found the uterus contracted, though Dr. Butler, the House Physician, told me she had had some post partum hæmorrhage, which he had controlled by the use of ext. of ergot internally, and applications of ice in the vagina. On making an examination to see the condition of the perineum, I discovered that she was having hæmorrhage, and that there was laceration of the perineum. Not supposing the hæmorrhage was from the perineum, but from the uterus, I had it firmly kneaded and appointed the operation two hours later. On my return to perform the operation, I found the patient still bleeding, though the uterus was firmly contracted and had remained so. The patient was anæsthetized with ether by Dr. Butler, and placed upon the table in the lithotomy position for operation. I then discovered the source of the hæmorrhage. It was from the perineal artery and other vessels from which the blood was steadily flowing *per saltum*. The laceration was circular—*i. e.*, at right angles to the axis of the vagina, beginning a very little to the right of the median line and extending towards the left almost exactly parallel with the muco-cutaneous line, forward into the left labium minus, over an inch and a half in length. The skin seemed to have been stripped off from the perineal body, and at the middle point of the perineum, or the beginning of the laceration, there was a sulcus fully an inch deep. Into this the blood was spurting from one point and oozing freely from several. It was with considerable difficulty that I controlled the hæmorrhage. I applied three ligatures of very fine silk, and compressed other bleeding points until hæmorrhage was stopped. Six sutures of silk were then inserted to bring the parts into apposition. Before tying the sutures the sulcus was carefully freed from clots, and the surface sponged with a somewhat strong solution (not strong enough to bleach) of carbolic acid.

This case is very striking. I have no doubt the patient would have bled to death had not the ocular examination been made and the exact source of the hæmorrhage discovered.

It also illustrates and introduces my next point—the desirability of operating upon these cases at once. Here I expect to raise serious question in the minds of many—the opposite practice is so uniform, even where the injury is discovered. The teaching and practice has been to say little or nothing to the patient, direct the nurse to keep the knees together by a binder, or by having the patient lie upon the side, in the expectation and honest supposition (I cannot use the word conviction, for there is no true basis for it) that it "will heal," "unite," "there will be union by first intention!"

In regard to the expectation that union will take place without co-aptation with sutures, the testimony of those who practice gynæcology and see the results of this "let-alone plan" of treatment is universally and very positively against such being the fact. The emphatic denial of this by good clinical observers can be accounted for in this way: Immediately after parturition, a rent seems to be of considerable extent—say an inch or an inch and a half. The parts are swollen. If examined a few days later, when the swelling has subsided, there seems to have been almost complete union. The rent now appears to be only a fraction of an inch in extent. The different aspect is attributed to a healing process, when it is in reality only a subsidence of swelling.

It may seem surprising that such opposite views of a question that involves a simple, but careful observation of facts—the examination with the eye—should give rise to such diversity of opinion and practice. A cut between the fingers which was constantly disturbed by motion and was irritated by a purulent discharge, no one would expect to heal by "first intention," or would heal in any way in the time usually spent in bed after parturition. Yet nearly all the early obstetrical writers, when they refer to the subject at all, advise a course that is tantamount to the above treatment, and not a few of the later writers advocate the same thing—binding the knees together and having the patient lie upon the side. No doubt such a course may be for the benefit of the profession, for the patient some day, if she is able to do so, will pay a handsome fee to the gynæcologist for sewing up the perineum to relieve a prolapsus uteri or a rectocele, but it certainly is not for the benefit of the patient. Dr. Emmet has tersely put it thus: "In the interest of the profession delay in closing the laceration was advisable, but the interest of the patient required that it should be closed as soon as possible after the child was born."

The diversity of opinion and practice alluded to above is probably due to two factors—first, the influence of the traditional teachings upon the subject; and second, the fact that the obstetrician does not see the results of the let-alone treatment as does the person who practices gynæcology. It is the latter class of men (Drs. Thomas, Emmet, Skene, Goodell, and others whose names are, perhaps, less familiar, but who are equally positive in their practice and teaching) who are clearest and strongest in their advocacy of the immediate treatment. Again, it is possible that some may wish to conceal from the patient the fact that a laceration has occurred, and they fall into the habit either of not examining her at all, to see whether a laceration has occurred or not, or else they fondly hope that the advice to lie upon the side may keep the parts together sufficiently to secure union.

It is an interesting historical fact that the first attempts at restoring the ruptured perineum were upon those recently incurred, and that the ordinary or secondary operation, first alluded to by Smellie, was regarded with little confidence. The first operations by Ambrose Paré and his "pupil, rival and contemporary," Guillemeau, were entirely successful. —(Bantock: On the Treatment of Rupture of the Female Perineum, pp. 7 and 8.) In regard to the primary operation Dr. Bentock uses this strong language: "I have no hesitation in affirming that if the injury were immediately attended to, . . . the remote operation would very seldom be required, and we should almost banish from the list of the gynæcologist a number of female complaints, such as cystocele, rectocele, and prolapsus uteri."—(Op. cit., p. 23.) I must not dwell longer upon this important point. But I am very certain that injuries of similar extent and of much less consequence in immediate and remote results, in other situations, are not treated with the same indifference as are lacerations of the perineum. A fresh wound is immediately closed to secure union at once, if possible, and also to avoid deformity. Dr. Bantock says: "Looking back at my own experience, I can affirm that I have never known the immediate operation to fail. . . . *I regard the operation as one of the greatest certainties in the whole range of surgery.*"—(Op. cit., p. 21.

The many varieties of lacerations I cannot now refer to. In the work by Dr. Mathews Duncan, entitled "Papers on the Female Perineum," is given the fullest account of these that I know of.

The immediate operation is so simple compared with the remote one that they are hardly to be compared together. No one of us need hesitate to introduce the two, three or more stitches usually required. The simplest, to read about, are no doubt, the *serres-fines*, but for myself I should hesitate to use them in a laceration of any extent, because they can only unite the cutaneous surfaces, leaving any portion of the perineal body that has been ruptured ununited—a surface to absorb the purulent lochia, and the weakening of the support by so much as it is destroyed. Silk sutures prepared after the antiseptic formula of Simon (1 part of carbolic acid to 10 of wax, in which the silk is steeped), by whom they are greatly preferred, are the easiest to use. They never, when properly prepared, give rise to any suppuration in their course, and are easily introduced and removed. Silver-wire has, in my opinion, certain advantages over any other form of suture. After a little practice it is as easily introduced and removed. The great advantage is that, having a degree of stiffness, it serves as a splint as well as suture. This is especially important in a part where every motion of the body makes more or less disturbance of the wounded part. I need not describe the operation. The cardinal rule is to *coaptate the parts as perfectly as possible.* It is always a gain to introduce the sutures close together.

The introduction of silver-wire sutures is much facilitated by the use of what is known as "open-eyed" needles. Instead of threading in the ordinary way, a single loop of thread is *hooked* into the eye. After the needle is passed it is then *unhooked,* and in its place the silver-wire is attached to the loop of thread, which, when drawn back, leaves the silver-wire in place. If the laceration involves much of the perineal body, the sutures should be so passed as to be entirely concealed from view from the point of entrance on one side to the point of exit on the other. If the rupture is of slight degree, they may be passed so as to emerge on the vaginal surface, and then reintroduced from within the vagina and brought out at corresponding points upon the opposite labium. The manner of passing the sutures is fully *illustrated* in most works upon gynæcology, to which the reader is referred. Round needles are to be preferred, as they do not wound arteries, and so little or no hæmorrhage follows their introduction. It is best to put a sponge, with a string attached to it, to faciliate its removal, into the vagina, to avoid having blood from the uterus flowing over the surface, thus obscuring the view. It is easy to carry in the obstetric bag what is needed to perform the operation, so that no time is lost in sending for them. I have sewed up these ruptures without an anæsthetic. The parts, immediately after labor, are so numbed as to permit this. If the operation is delayed for several hours an anæsthetic is needed. It is necessary to have good light.

The after-treatment is of importance. It is not necessary, usually, to employ the catheter to empty the bladder. The patient may do that lying upon her back or face. The vagina should be syringed out twice daily with a solution of carbolic acid (1 to 2 per cent.), or of permanganate of potash. This must be done with some care, lest the sutures be disturbed. It is better for the physician to do it himself unless he can have the services of a *competent* nurse. Great diversity of practice prevails in regard to confining the bowels. Some advocate leaving them entirely to nature. Others move them on the third day after the routine plan. Others still, and these of the largest experience and most uniform success, confine the bowels for seven or eight days, and then, after a mild aperient, give an enema to aid it. My own experience, in which I have tried each plan, favors giving a fluid but nutritious diet, and leaving the bowels entirely to nature, except that I direct that as soon as there is a desire to stool, to give a warm soap-suds enema. After eight or nine days the sutures may be removed. Meanwhile the patient is allowed the freedom of lying in any position, but the knees are kept together by a towel or bandage.

Before closing, I wish definitely to allude to a few reasons for performing the immediate operation. The first is that the patient is not kept in bed longer than she otherwise *should* remain there after parturition. If the secondary operation is performed, she of course is put to bed for at least two or three weeks. There is thus an important gain of time and convenience to the patient. Secondly. Unless the operation is immediate and the union immediate there is loss of tissue by the ulceration at the time, besides that which is removed to freshen the surfaces at the secondary operation. *This loss is irremediable,* and sometimes it is very considerable. Thirdly. The primary operation is more uniformly successful than the secondary. Fourthly. The large number of cases examined by Dr. Reamy, six hundred, showed " that in all the cases examined, *the repair left deformity ;* and that * * the injury [in all these cases] originally stopped short of dividing the sphincter ani." Fifthly, but of chief importance, it closes a raw surface which might absorb septic material. How many cases of " puerperal fever " are due to undiscovered and unclosed lacerations ? No doubt many.

Should all cases of laceration, those involving the entire perineal body, as well as the partial and slight ones, be operated upon, and that at once ? This is a comprehensive question. It may seem too sweeping to answer it in the affirmative, without qualification; yet I am sure the records of immediate operations in extensive lacerations justify such a practice. A case of great interest, of this character, is related by Dr. Birmingham in the "Medical Record" of July 22d, 1876. The important point is, that no more tissue is lost, even if the operation fails. And success in these cases, as in the ruptures of lesser degree, is the rule, and failure the exception. The two first recorded cases were of this character, and were, as before stated, *entirely successful.* There may occur cases of extensive rupture where it would be better to wait. *The general condition of the patient would be the determining factor in such cases.* Fortunately, such severe lacerations are now rare.

In conclusion, I must, in all sincerity, add that I deeply regret that neither my time nor my abilities have enabled me to present this subject in a manner at all commensurate with my appreciation of its importance. For the same reason I must apologize for occupying so much of your time. I shall have my highest gratification if what I have written shall serve to introduce a topic which shall be taken up by those who are competent to treat it satisfactorily.

DISCUSSION.

Dr. A. J. C. Skene: Judging from his own experience, the speaker was of the opinion that a wide, shallow pelvis predisposed to rupture perhaps more than a deep pelvis. This, however, is not a fact which he could by any means demonstrate by any clinical facts in his possession, but that is the general impression left upon his mind by his observation.

Then again, with reference to prophylaxis, or prevention of lacerations: He would not be willing to enforce so fully as the author has the method credited to Dr. Goodell, but not originally his. He had never been able to see how bringing the perineum forward could prevent its laceration. He did not see where you are going to get any increase of elasticity, or any increase of tissue, by bringing the perineum forward, because it must pass backward before the head can escape from the perineum. That pressure can be made to prevent too early extension of the head, and thereby guard against rupture to a great extent, is no doubt true.

He could not see the advantage of a digital manipulation of the anus and rectum, and would take exception to that method of prophylaxis.

In describing the extent and character of lacerations, he did not think that the author brought out as clearly as he might the importance of a laceration of the deep structures of the perineum without laceration of the tegumentary coverings. All physicians are familiar with the various degrees of injury to the perineum as described in the books, but there is another injury of the perineum, and that is when there is a separation of the aponeurosis of the muscles of the perineum, and when the mucous membrane and skin are not injured. We are all familiar, also, with the fact that the mucous membrane of the vagina can be ruptured, and the integument outside, while the muscular walls of the perineum remain in the normal condition. That form of injury in which the body of the perineum gives way, and still the superficial surfaces are not injured, is one of the most important in its evil effects. The modes of detecting that injury and the modes of remedying it are important.

Superficial lacerations of the integument and the mucous membrane of the vagina are easily dealt with. They are of little consequence, except as they increase the danger of septicæmia, for they are left without special care, and heal promptly as a rule.

There is another condition, and that is, an injury to the perineum by over-distension during labor; not a laceration, but a relaxing of the parts, which is not overcome during convalescence. We know that the distension of the muscles is such that at the time there is a partial paralysis, which may without proper care and treatment continue. We all have often seen patients with paralysis of the vaginal walls and uterus. I believe there is no anatomical loss of the perineum, but simply a functional loss from over-distension. This is seen in patients who get up too early after parturition, and do not allow the involution to go on to completion.

Now, with reference to the management of the perineum in the event of laceration, we would say that no one can at all times prevent laceration, but all ought to secure its proper treatment. If a laceration occurs and remains ununited, for years, as is often the case, it is almost impossible, in some cases, to restore it properly. The divided surfaces may be united; but there is an atrophy of the perineal muscles which can never be overcome, and the function of the part is lost, for a perineum without muscular tissue is useless. Muscular tissue set at rest for a long time in any portion of the body, undergoes atrophy, and it can never be restored. That is the reason in some cases why an operation has been performed, and the woman is no better than she was before.

Once more regarding treatment: and that is in regard to the coaptation of the lacerated surfaces. He entirely endorsed the doctor's urging immediate operation. He thought it always ought to be undertaken, unless the condition of the patient prevents. There is one item of treatment which is worthy of discussion; and that is regarding the question of union of laceration without the use of sutures. It is claimed that union can be secured by rest only, and that I know is true in occasional instances. Some authors claim that there is a retraction of the perineal muscles, which will interfere with coaptation of the deeper structures of the perineal body, and that is true of the majority of cases, and that is one reason why coaptation, followed by rest, is not as a rule followed by perfect union. There is another reason why lacerations left to nature seldom unite. There are often blood clots left in the wound which prevent immediate union.

He believed that if hemorrhage was arrested, and the edges of the wound coapted, more cases would unite without the aid of sutures. There is no better plan of coaptation than by first applying sutures and putting the patient at rest. There is an advantage in operating immediately, and that is, the wound is cleansed. Another advantage of coaptation by sutures is that the parts are kept in firm position, and retraction of the muscles prevented. Then, again, by using sutures, the mucous membrane is held together, so that the lochial discharge may not insinuate itself between the edges of the wound.

He took exception to the statement of the author regarding the results of the primary operations in comparison with secondary operations. He did not believe that if you take the primary operations, as performed by general practitioners in this country, and compare them with the secondary operations by such men as Emmet and Thomas, that the statement made in the paper would hold good. One reason that primary operations fail, when it does so, is that the lochial discharge will get between the edges of the wound. Now, he had suggested that when the parts are brought together by the sutures, the mucous membrane should be protected and held together firmly by the application of collodion. He had not had an opportunity of performing primary operations sufficiently often to know just what the result would be.

Reference had been made to treatment by serre-fines. He remembered listening to Dr. Garigues on one occasion in relation to this subject, and it seemed to him that the idea was of one who had not had much experience at the bed-side. The mere coaptation of the skin is all that he does. If you merely bring the skin together and let it alone, he saw no earthly use of the serre-fine. That same result will be accomplished without any sutures whatever by mere coaptation. Physicians are led into error because they have seen good results by this means, and trust that they will have the same good results again and again.

Dr. T. N. De Bowes spoke of the relative dimensions of the fœtal head and the maternal pelvis, and thought the whole question depended upon a defect as to magnitude, not of elasticity. He concluded by calling attention to a well-known surgical dogma, that *a lacerated wound is not a bleeding wound;* and drew the conclusion, therefore, that the danger from a ruptured perineum is not as great as discussion concerning it would indicate.

Dr. E. N. Chapman: I will take the liberty to criticise the manner of supporting the perineum so generally advocated. I am convinced from personal observation in the earlier years of my practice, that women attended by midwives rarely have a rupture—more rarely indeed than when attended by physicians. The same observation is made by Tyler Smith, who was unable to offer any explanation. The fault must be in the kind of support given to the perineum. The conclusion is, provided the assertion is true, that no support is better.

As midwives place their patients on the back, and elevate the head and shoulders on pillows, the nates sink down into the bed, and the posterior part of the perineum receives a gentle support, one sufficient to guide the child's head forward, but not sufficient to prevent the expansion of the coccyx and the dilatation of the body of the perineum. In this position the propelling power of the uterus forces the child's head downward and backward against the coccygeal bones, and attains full expansion before the anterior edge of the perineum is acted upon. This point is all important in order to secure space at the vulvar orifice, and allows the vertex to evolve under the pubic arch.

If the patient be confined on the left side, the direction of the expulsive force is thrown more forward and the child's head is pressed more against the anterior segment of the perineum. This portion yields before the thicker part is fully dilated. Now, if the physician places his hand against the posterior part of the perineum, and pushes the child's head forward to the vulva, he will be almost certain to meet with a rupture. All the strain comes on the posterior commissure of the vulva.

By this procedure the mucous membrane of the vagina is pushed forward, and, of necessity, giving way, the skin becomes involved.

When the patient is on the side, it is impossible to give the proper support to the perineum by the left hand, or secure sufficient space for the child's head and body to move forwards and upwards in the proper curve.

The plan which I have always followed since taking the hint from midwives is as follows : When the pains become expulsive, I place the patient on her left side, and afford every facility for the full action of the uterus, diaphragm and abdominal muscles. When the child's head presses strongly upon the perineum, I let nature have her own way. I never direct the vertex forward, or in any other way interfere, as my object is to secure a full expansion of the coccyx and a full dilatation of the main body of the perineum. These two points being attained, as is known by the expansion of the anus, the equable bulging of the whole perineum, and advance of the vertex to the vulva, I turn the patient more on her back, so that she retains only a slight inclination to the left side, and place my right hand, protected with a thin napkin, against the posterior part of the perineum. My object is not to direct the head forward or to aid the delivery, but rather to so protect the perineum that, when fully distended, it shall complete the curved line made by the hollow of the sacrum and the expanded coccyx. Should the head and body of the child move in this curve, ruptures would be rare, provided sufficient time was consumed in the transit. In all cases, as the head distends the vulva, the patient must be ordered, and that peremptorily, not to bear down. If she fails to obey, and the pains are violent, the too rapid progress of the head should be checked by direct pressure. As the vertex enters the world, the hand should be brought more forward, so as to support the anterior edge of the perineum, and direct the head forward over the pubic bones. The greatest danger is when the lower part of the face slips past the anterior border of the perineum.

The head being born, there is still great danger of rupture from the passage of the shoulders, unless care is taken that the child's body moves in the same curve and the perineum receives the same support. Keeping my right hand in the same position, I carry my left hand above the patient's thigh, and support the child's head as it comes forward over the pubic bones.

Proceeding in this way, it is unusual for me to meet with serious ruptures. In primiparæ, of course, the fold of mucous membrane, formed by the union, internally, of the labia majora has always been ruptured, but the part of the commissure formed by the skin has seldom been involved. Should a woman meet with no accident in her first labor, there is little excuse for one during the birth of other children.

THE MEDICAL SOCIETY OF THE COUNTY OF KINGS.

A regular stated meeting of the Medical Society of the County of Kings was held on the evening of Tuesday, February 15th, 1881, at 398 Fulton Street, at 8:20, the President, Charles Jewett, M.D., in the chair, Dr. Benjamin Edson, Secretary *pro tem.*

There were about forty members and many students from the L. I. College Hospital present.

The reading of the Minutes of the last meeting, not being present, was omitted.

EDWARD GRETHER, M.D., promoted at the University of Würzberg, 1871, (Register) of 162 McKibbin Street, was proposed for membership by Dr. A. F. W. Reimer.

THE COUNCIL reported acceptance to membership of H. A. Fairbairn, M.D., Col. P. & S., N. Y., 1878, and H. L. Cochrane, M.D., L. I. C. H., 1879.

THE COUNCIL also recommended the appointment by the President of three or more committees on certain of the Departments of Medicine and Surgery, for the purpose of engaging in the investigation of, or reporting progress in, these several departments.

THE COUNCIL further recommended that the details of the working of these scientific committees as to time and place of meeting, etc., be under the direction of the Council.

On motion of Dr. Stuart, it was resolved that the recommendations of the Council be adopted as the action of the Society.

The paper of Dr. F. H. Stuart, entitled "Management of the Perineum During Labor, and the Immediate Treatment of Lacerations," was then read by the author, and debated by Drs. A. J. C. Skene, E. N. Chapman and T. N. De Bowes.

Further discussion was not attempted because of the lateness of the hour, and the Society listened to the reading of the second paper, by the author, Dr. J. A. McCorkle, entitled "Therapeutic Hints Based upon Certain Arrested or Perverted Physiological Processes."

It was debated briefly by Dr. S. G. Armor.

THE CHAIR announced the appointment of the following committees:

On the death of Dr. Elmendorf, Drs. Z. T. Emery, W. H. Thayer, and A. W. Catlin.

On Hygiene, the committee to select their own chairman, Drs. Benj. F. Westbrook, N. B. Sizer and Benjamin Edson.

On Registration: Drs. W. F. Griffiths, W. G. Russell, C. H. Potter, A. S. Clarke, N. Matson, J. A. Jenkins, and F. W. Rockwell.

On Physicians' Mutual Aid Association: Drs. W. W. Reese, Alex. Hutchins, B. A. Segur, G. W. Baker, N. W. Leighton, C. A. H. Szigethy and G. W. Wells.

THE CHAIR declared the following gentlemen to be duly elected members of the Society: Francis M. Thomas, M.D., J. C. Schapps, M.D., F. Lucas, M.D., and Aaron E. Peck.

There being no further business, the Society adjourned.

Ἀσκληπιὸς ὁ Σωτὴρ

Χαρμα μέγ' ανθρωποισι, κακων θελκτῆρ' οδυναων.

Hymns of Homer, No. XVI.

PROLIFERATIONS.

——With this issue begins the SIXTH VOLUME of THE PROCEEDINGS. The modest promises of five years ago have been more than fulfilled. The results have gone far beyond the anticipations of its projectors. That this record of the Society's work has proved of benefit to the Society itself in giving it a prominent position, nay, a leading one, among medical societies, is a matter of history, and that it has promoted the activities of members of the Society and paid them for good work, in giving their papers immediate and widespread circulation, has been long recognized.

A moment's consideration will recognize the fact that THE PROCEEDINGS has not been carried along thus far without hard work. The successive COUNCILS have reaped neither personal profit nor personal reputation therefrom. To promote the welfare of the Society and encourage its *corps d'esprit*, have been the sole motives of the work. The absolute impersonality that has been maintained in the conduct of THE PROCEEDINGS has been essential to its success as a Society publication; but concurrent with that has been the disadvantage of the very large impression that, in some way, the Society was shouldering the heavy expenses attendant upon its publication. This impression has rendered many indifferent to any personal contribution to its financial support. The impression is totally without foundation. Not one cent of this Society's funds has ever gone towards meeting the expense of its publication. And, further, the various circulars that have been issued and forwarded to the members of the Society, asking for the nominal subscription price, have met with but a very indifferent response. A very small proportion of the members have paid this small sum.

The usual annual circular (issued February 21st) is in the hands of the physicians of the city. What is to be its fate is not yet known. On page 40 will be found a list of responses to this last appeal, up to the date of going to press.

So much depends upon the continuance of this publication, that the COUNCIL felt justified in urging a general subscription. The aggregate of these subscriptions would be important help in carrying it on, and the sum for each is so small that it can be a burden upon none. It is hoped that the circular will not be forgotten, but that a prompt and general response will be made.

——WITHOUT ACKNOWLEDGMENT, the entire paper of Dr. Skene is copied from our December issue into the February number of the *Chicago Medical Journal and Examiner.*

——SALT is recommended as a prophylactic against diphtheria. Persons who have reason to believe that they have been exposed to the disease should use salt freely with the food, and also use a solution of salt as a gargle.

——THERE is nothing as strong as habit. It is told of a physician, who always demanded payment on the spot, that he was so particular that when he prescribed for himself he used to take a guinea out of one pocket and put it into another.

——JABORANDI IN ASTHMA.—In the journal just above mentioned, Dr. H. J. Thomas writes that he has treated twenty cases; not one has it failed to help. He gives four drop doses of the fluid extract thrice daily, and a double dose at bedtime.

——WHOOPING COUGH has been successfully treated by Dr. Barèty, of Nice, by turpentine vapor. By accident, a child severely affected, was allowed to sleep in a room, recently painted and redolent with turpentine odor, when noticeable improvement took place. Dr. B. has since employed this drug, placed in plates and allowed to stand in the rooms occupied by whooping cough patients. He holds that the disease is mitigated and its duration lessened by this simple expedient.

——THE KINGS CO. INSANE ASYLUM has suffered many things from the politicians, but it is now comparatively emancipated from their control. Dr. J. C. Shaw, the present medical head of that institution, has shown great energy and independence during the yet short tenure of his office, especially by the introduction of the "non-restraint" system of treatment, so generally ignored in this country but well-nigh universal in the best English asylums. An extremely interesting article by Dr. S. may be found in *Archives of Medicine*, February, showing that he is enthusiastically committed to this humane but not inert kind of discipline. This new departure will, of necessity, centre a great deal of interest on the part of specialists and philanthropists, upon this institution and its future history.

——Advance in Therapeutics in 1880.—The *Med. Press* summarizes the year's work as follows: New remedies many, a few good, many bad, most indifferent. Tonga valuable in facial neuralgia; sulphide of calcium in suppuration—its action marked and reliable, grain-doses now admitted; the nitrites of potassium and sodium have the action of amyl nitrite, but milder; ergot (again ?) found useful in diabetes; pilocarpine useless in hydrophobia, which still defies all treatment; this last drug, tried in many directions, gave meagre results; benzoate of soda commended in scarlet fever and gonorrhœal ophthalmia; salicylate of soda, according to Dr. Greenhow, mitigates but little the complications of rheumatic fever, while it may be a positive injury to the heart; salicin is inefficacious, while salicylate of quinia is highly praised by Dr. Hewan; the value of cold baths in typhoid fever has become more than doubtful. Thus far the *Med. Press;* our own pages, in the past year, have pointed out the utility of potassium iodide in aneurism; the salicylate of calcium in infantile diarrhea; and the prophylaxis of puerperal convulsions.

——Francis Bauch, M. D., died February 17, at 123 Floyd Street, E. D., at the age of 54 years, *causa mortis* pneumonia. He was well known for his skill in the manufacture of artificial eyes, his place of business having been in New York, on Bleecker Street.

——The Mortality by Diphtheria, in this city, began to rise in the latter part of August. In September there were 105 deaths ; in October, 168 ; and in November 219 ; in three months, 492, without material diminution in December, down to the time of going to press. The total for the year 1880 promises to be higher than the highest yearly total hitherto reached, namely, 965 deaths in 1875. Mayor Howell has been led to take official notice of the loss of life by this disease, and has called upon the "city fathers" to take steps looking toward the ventilation of the sewers and other means of cleansing the city. The use of perforated man-hole covers is especially advocated. The wards that have furnished the greatest number of deaths are the Eleventh, Fifth, Sixteenth, Twentieth, Tenth, Fourteenth, and Seventh, in the order in which they are named.

Scarlatina occurred in some English families who had been eating American hams. These latter were reported as the probable origin of the disease, and what remained of them was immediately destroyed. This adds a new attraction to this article of diet ; it has already been distinctly proved that all American hams that go abroad have trichinæ within their substance, while their envelope is sure to be enriched with lead in the form of the chromate. We await further developments.

——The Tenth Census. Preliminary reports from the Census Bureau give the following totals, subject to future corrections, for the wards of Brooklyn; for purposes of comparison the returns of the State Census in 1875 are placed side by side with those for 1880.

Wards.	Census of 1880.	Census of 1875.
1	18,729	16,084
2	9,254	8,860
3	18,271	15,809
4	12,819	12,616
5	18,524	18,591
6	35,442	34,072
7	31,657	26,488
8	17,396	12,127
9	15,045	13,643
10	27,139	24,866
11	21,680	21,629
12	22,200	17,525
13	21,029	19,547
14	25,570	23,925
15	23,654	21,255
16	42,716	39,206
17	30,088	23,998
18	23,926	17,459
19	27,661	21,908
20	24,188	21,430
21	31,955	24,834
22	25,473	17,736
23	14,396	10,005
24	8,822	5,799
25	19,055	13,081
City	566,689	482,493

The increase in population in the five years ending in 1880 is at a less rate per centum than in the previous lustrum; the rule being that the State census records a greater growth than that of the United States. The rate of increase within ten years will be seen by the following comparison, facilitated by the use of logarithms:

Pop. in 1870 = 396,099 = log. 5.5978038 = a.
" " 1875 = 482,493 = log. 5.6834910 = b.
" " 1880 = 566,689 = log. 5.7533448 = c.

Differences: b — a = 0.0856872 ; c — a = 0.1555410 ; and c — b = 0.0698538 ; and dividing these differences by five and ten years respectively we find the logarithm of the annual rates from census to census thus: from 1870 to 1875, 0.0171374 ; from 1870 to 1880, 0.0155541 ; from 1875 to 1880, 0.0139707 ; the numbers belonging to these logarithms supply the following rates per cent. for the three periods, viz.: .0402, .0364 and .0327 per annum. The entire increase from 1875 to 1880 was 84,196, or .1745 for five years' rate.

——The Regular Monthly Meetings of the Medical Society of the County of Kings are held at 8 P. M. on the third Tuesday of each month, at Everett Hall, 398 Fulton Street.

The March meeting will be held on the 15th, at which the following papers will be presented:

The Obstetrics and Gynecology of Harvey, by Dr. F. H. Stuart.

Recognition and Removal of Foreign Bodies from Cornea, by Dr. J. D. Rushmore.

MEDICAL SOCIETY OF THE COUNTY OF KINGS

OFFICERS AND COMMITTEES FOR 1881.

President	C. Jewett, M.D., 307 Gates Ave.
Vice-President	F. W. Rockwell, M.D., 6 Lafayette Ave.
Secretary	R. M. Wyckoff, M.D., 532 Clinton Ave.
Assistant-Secretary	J. H. Hunt, M.D., 419 Hart St.
Treasurer	J. R. Vanderveer, M.D., 301 Carlton Ave.
Librarian	T. R. French, M.D., 469 Clinton Ave.

CENSORS.

B. A. Segur, M.D., 281 Henry St.
A. Hutchins, M.D., 796 De Kalb Ave.
B. F. Westbrook, M.D., 174 Clinton St.
W. H. Thayer, M.D., 171 Livingston St.
J. D. Rushmore, M.D., 129 Montague St.

DELEGATES TO THE MEDICAL SOCIETY OF THE STATE OF NEW YORK.

(1878 to 1882.)

Drs. J. C. Shaw,
J. D. Rushmore,
C. Jewett,
A. Otterson,
Drs. G. G. Hopkins,
J. S. Wight,
A. Sherwell,
W. Wallace,
Drs. J. Byrne,
B. F. Westbrook,
E. N. Chapman,
F. W. Rockwell.

Chap. XI., Art. 2, of By-laws: "Any Member elected as Delegate to the Medical Society of the State of New York, who shall be unable to act as Delegate during two successive years, shall be considered to have vacated his position as Delegate."

DELEGATES TO THE AMERICAN MEDICAL ASSOCIATION.

Drs. Andrews,
Armor,
G. W. Baker,
Bartlett,
Burge,
Byrne,
A. S. Clarke,
Crane,
Corbally,
Evans,
Drs. Fowler,
Griffiths,
Hutchins,
Hutchison,
L. S. Pilcher,
Prout,
Raymond,
Read,
Rockwell,
Rushmore,
Russell,
Drs. Segur,
Shaw,
Sherwell,
Skene,
Squibb,
Vanderveer,
Walker,
B. F. Westbrook,
H. F. Williams,
Wyckoff.

COMMITTEES OF THE SOCIETY.

HYGIENE.

Drs. B. F. Westbrook,
B. Edson,
N. B. Sizer.

REGISTRATION.

Drs. W. E. Griffiths,
A. S. Clarke,
J. A. Jenkins,
Drs. W. G. Russell,
N. Matson,
F. W. Rockwell,
Dr. C. H. Potter.

PHYSICIANS' MUTUAL AID ASSOCIATION.

Drs. B. A. Segur,
G. W. Wells,
W. W. Reese,
G. W. Baker,
N. W. Leighton.
A. Hutchins,
C. A. H. Szigethy,

> "Nor in truth it is a much less arduous business to investigate the intimate mysteries and obscure beginnings of generation than to seek to discover the frame of the world at large, and the manner of its creation. The eternity of things is connected with the reciprocal interchange of generation and decay; and as the sun, now in the east and then in the west, completes the measure of time by his ceaseless revolutions, so are the fleeting things of mortal existence made eternal through incessant change, and kinds and species are perpetuated though individuals die." (Op. cit., p. 225–6.)

Again, in another place, he says:

> "The number of eggs serves the same end as abundance of conceptions among viviparous animals—they secure the perpetuity of the species. Nature appears to have been particularly careful in providing a numerous offspring to those animals, which by reason of their pusillanimity or bodily weakness, hardly defend themselves against the attacks of others. She has counterbalanced the shortness of their own lives by the number of their progeny. * * * All generation as it is instituted by nature for the sake of perpetuating species, so does it occur more frequently among those that are shorter-lived and more obnoxious to external injury, lest their race should fail." (Pp. 443–4.)

There are some points in his work upon Generation to which I call attention. They show his close observation and strong powers of reason. What he held as clearly demonstrated to himself, but which he manifestly fears will not be accepted by his readers, later investigations have made plain. In discussing the share each sex has in generation, he concludes:

> "It is certain that eggs of every description, prolific and barren, are engendered and formed by the hen singly, but that fecundity accrues from the male alone; the cock, I say, contributes neither form nor matter to the egg, but only that by which it becomes fertile and fit to engender a chick." (Op. cit., p. 294.) See also p. 302.

Again, in relation to the individuality of the offspring, having independent organs, and that these organs are active before birth, he says:

> "The embryo in the egg boasts of its own blood, formed from the fluids contained within the egg; and its heart is seen to pulsate from the very beginning."

A little farther on he makes this remark, which seems to me to hint at the modern idea of the structure of the placenta:

> "I believe, indeed, that it will be held as sufficiently proven, that even the fœtus of viviparous animals still contained in the uterus is not nourished by the blood of the mother, * * but boasts of its own peculiar vital principle and powers, and its own blood, like the chick in ovo." (Op. cit., p. 298.)

In another place he says more plainly:

> "The fœtus of a viviparous animal draws its nourishment from the uterus whilst it is connected with its mother, like a plant by its roots from the earth." (P. 446.)

And again he says:

> "It clearly appears that the fœtus in utero is no more nourished by its parent's blood than is the suckling afterwards."

The observations of Darwin and Wallace in regard to natural selection, and the uses of certain parts, are but repetitions of observations made by Harvey. (Referred to on p. 425, as well as many other places.)

He studied the subject of Generation from every point of view:

> "In reference to * * family likeness," he says, "we may be permitted to inquire as to the reason why the offspring should at one time bear a stronger resemblance to the father, at another to the mother, and at a third, to progenitors, both maternal and paternal, further removed? particularly in cases where * * at the same moment several ova are fecundated. And this, too, is a remarkable fact, that virtues and vices, marks and moles, and even particular dispositions to disease, are transmitted by parents to their offspring; and that while some inherit in this way, all do not. Among our poultry, some are courageous and pugnaciously inclined, and will sooner die than yield and flee from an adversary; their descendants, once or twice removed, however, unless they have come of equally well-bred parents, gradually lose this quality; according to the adage, 'the brave are begotten by the brave.' In various other species of animals, and particularly in the human family, a certain nobility of race is observed; numerous qualities, in fact, both of mind and body, are derived by hereditary descent." (Op. cit., p. 429.)
>
> "By this same law the son is born like his parents, and virtues which ennoble and vices which degrade a race, are sometimes passed on to descendants through a long series of years. Some diseases propagate their kind, as lepra, gout, syphilis, and others. But why do I speak of diseases, when the moles, warts, and cicatrices of the progenitor are sometimes repeated in the descendant after many generations?" (P. 582.)

In Exercise the Sixty-second is a fine specimen of analogical reasoning upon the zoological adage: "Omne vivum ex ovo," which concludes (p. 460) with this profound generalization:

> "For perfect nature, always harmonious with herself in her works, has instituted similar parts for similar ends and actions: to arrive at the same results, to attain the same forms, she has followed the same path, and has established one and the same method in the business of generation universally."

Having considered at length the subject of Generation in the careful study of the hen's egg, he proceeds to give the anatomy of the genital organs, instituting constant comparison between the hind and the human female. King Charles I., whose physician he was, being fond of hunting, had large herds of deer, and from these supplied Harvey with an abundance of material for his physiological and anatomical studies. The picture which represents Harvey explaining the circulation of the blood to his majesty, will be called to mind by this fact.

In connection with the anatomy of the uterus occurs this remarkable passage, which shows the boldness and originality of his gynæcological practice:

> "In all animals this uterine orifice [os uteri] is found obstructed or plugged up in the same way as is wont to be in women, among whom we have sometimes known the outlet to be so much constricted that the menses, lochia, and other humors were retained in the womb, and became the exciting cause of most severe hysterical symptoms.

In such cases it became necessary to contrive a suitable instrument with which, the os uteri being opened, the matters that stagnated within were discharged, when all the accidents disappeared."

Whether the instrument referred to was a Peaslee's, or Hank's Dilator, *i. e.*, graduated sound, or was a Wilson, or Sims, or Ball, or Miller, or Ellinger, for immediate dilatation, does not appear. But the principle is here clearly enunciated. He also refers to his practice of the use of intra-uterine injections:

> "By this contrivance injections could also be thrown into the cavity of the uterus, and by means of these I have cured internal ulcers of the womb, and have occasionally even found a remedy for barrenness."

(Was this by practicing artificial insemination, as was so strenuously advocated by Sims a few years ago?)

It would appear as if dilatation of the uterus and intra-uterine injections were common modes of practice with Harvey, for he has observed that in cases of retention of the lochia,

> "When art did not avail to promote its exit, the woman has presently died."

And again, in the case of a

> "Noble lady in childbed being attacked with fever for want of the ordinary lochial discharge, had the pudenda swollen and hot; finding the uterine orifice hard and firmly closed, I forcibly dilated the part by means of an iron instrument sufficiently to admit of my introducing a syringe and throwing up an injection. The result was favorable."

In the case of the wife of a doctor of divinity, healthy but barren, and yet desirous of offspring, who had fared at the hands of others not unlike the woman in the Scriptures, who had an issue, and had suffered many things of many physicians, and was nothing bettered, at length consulted Harvey, he dilated and injected the uterus repeatedly, and milder means failing, at length added to the former injection "a little Roman vitriol," which at once excited powerful contractions, and he was obliged to resort to "the application of soothing and anodyne remedies" to secure relaxation. This patient likewise recovered.

What is an anomaly in the human female, a bicorn uterus, from incomplete union of the Müllerian ducts, is stated by Harvey to be the normal condition in all quadrupeds, except the ape and the solipeds. Tubal pregnancy is thus referred to as being analogous to conception in the cornua of the lower animals:

> "For as many of the lower animals regularly conceive in the cornua uteri, so do women occasionally carry their conceptions in the cornu, or this tube [Fallopian], as the learned Riolanus has shown from observations of others, and as we ourselves have found it with our own eyes."

The description of the uterine ligaments, of the broad ligaments, supporting the ovaries (called by him testes), and the uterine vessels is graphic. The enlargement of the uterine vessels during pregnancy is pointed out as being "relatively larger and more numerous than in any other part of the body," and also that the arteries are more numerous here than the veins, and that air blown into the arteries makes its way into the neighboring veins.

The development of the fœtus in the cornu of the uterus of the doe is described with minuteness and with frequent comparison with the human fœtus. He found females were frequently in the right cornu, and males in the left, and yet he does not believe that the sex is determined by this circumstance, or, as we would say, that the ovaries—right and left—determine the sex. It was twenty-two years after the publication of Harvey's work (1673) that Dr. Graef described the follicles of the ovary. Of these Harvey knew nothing, and he repeatedly asserts that he could never see any change whatever in the ovaries even during the rutting season.

In the body of a woman who died of fever he found an embryo of about fifty days of gestation. He describes it as being an hermaphrodite. Externally, the sex seemed to be of a male ; internally, of a female. The description is very minute, and shows that at that period the sex is not differentiated externally.

He notes the change in color of the lungs after they have once been inflated, and states that, "by this indication is it known whether a mother has brought forth a living or dead child."

In regard to parturition, he considers the changes that take place in the mother in preparation, as it were, for labor and the changes in position of the fetus.

He describes the descent of the uterus, the "lightening before labor," and states that, at the same time, not only do the soft parts become "relaxed and dilatable," but that the pelvic articulations become relaxed, and "yield readily to the passage of the fœtus." These, and the appearance of true milk in the breast—"milk, I mean, of a character suitable for the sustenance of the offspring"—he regards as certain evidence that "delivery is not far distant."

He endorses Aristotle in saying that the period of utero-gestation varies with the size of the animal : "Each animal has a definite magnitude, beyond which it cannot pass." He thus hints at the fœtus being, in part, the cause of labor.

"'In the human species,' says the philosopher [Aristotle], * * 'is the period of utero gestation subject to great irregularity. In other animals there is one fixed time, but in man several; for the human fœtus is expelled both in the seventh and tenth months, and at any period of pregnancy between these; moreover, when the birth takes place

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THE OBSTETRICS AND GYNÆCOLOGY OF WILLIAM HARVEY.

BY F. H. STUART, M.D.

> "A good fame is as the beams about the sun, or the glory about a holy picture that shows it to be a saint: though it be no essential part, it rises from the body of that virtue which cannot choose but shine and give a light through all the clouds of error and destruction."—FELLTHAM.

The fame of Harvey, as the father of English obstetrics, has been overshadowed by the greater fame of being the discoverer of the circulation of the blood. The latter was his first and greater work.

I have called him the father of English obstetrics. He was the first Englishman who wrote of obstetrics in his own language. The publication of his work upon "The Generation of Animals," and the "Essays on Parturition, on the Membranes and Fluids of the Uterus, and on Conception," published just two hundred and thirty years ago, and thirty-three years after his work on the "Motion of the Heart and Blood," may be said to be the foundation of the study of the subject. His associates were proud to record during his lifetime, on the pedestal of the bust erected to his memory, in the hall of the College of Physicians, "that he gave motion to the blood, origin to animals, and must ever be hailed *Stator Perpetuus.*"

The story of the publication of his obstetrical writings is told by his friend and advocate, Dr., afterwards Sir, George Ent, in a way that reflects Harvey's modesty as well as his sincere devotion to science, and his industry, unabated in old age. Ent's visit to Harvey, then dwelling not far from London, is thus related by him:

"I found him, Democritus like, busy with the study of natural things, his countenance cheerful, his mind serene, embracing all within its sphere. I forthwith saluted him and asked if all were well with him? 'How can that be,' said he, 'whilst the Commonwealth is full of distractions, and I, myself, am still in the open sea? And truly,' he continued, 'did I not find solace in my studies, and a balm for my spirit in the memory of my observations of former years, I should feel little desire for longer life. But so it has been, that this life of obscurity, this vacation from public business, which causes tedium and disgust to so many, has proved a sovereign remedy to me.'"

Dr. Ent reminded him that he had said that he had never dissected any animal but that he made some new discovery. To this he replied:

* * * "Though much has already been made out by the learned men of former times, I have still thought that much more remained behind, hidden by the dusky night of nature, uninterrogated. * * * Nature, however, is the best and most faithful interpreter of her own secrets; and what she presents, either more briefly or obscurely in one department, that she explains more fully and clearly in another. No one indeed, has ever rightly ascertained the use or function of a part who has not examined its structure, situation, connections by means of vessels, and other accidents in various animals, and carefully weighed and considered all he has seen." * * "Shall we imagine * * that all knowledge was exhausted by the first ages of the world? If we do, the blame verily attaches to our indolence, nowise to Nature."

Dr. Ent then expressed the curiosity of the learned world as to his studies, and that they were eagerly looking for his farther experiments.

"And would you be the man," said Harvey, smilingly, "who should recommend me to quit the peaceful haven where I now pass my life, and launch again upon the faithless sea? You know full well what a storm my former lucubrations raised. [The treatise on the Circulation of the Blood.] Much better is it oftentimes to grow wise at home and in private, than by publishing what you have amassed with infinite labor to stir up tempests that may rob you of peace and quiet for the rest of your days."

At length he was persuaded first to show the works to his friend, then to give them to him, "with full authority either speedily to commit them to the press, or to suppress them till some future time." Once possessed of the treasures, Ent took his leave, "feeling like another Jason laden with the golden fleece."

The spirit which animated Harvey in all his work is beautifully expressed in these words from the Introduction to the Exercises on Generation:

"What I shall deliver in these, my Exercises on Animal Generation, I am anxious to make publicly known, not merely that posterity may perceive the sure and obvious truth, but farther, and especially, that by exhibiting the method of investigation which I have followed, I may propose to the studious a new, and unless I mistake, a safer way to the attainment of knowledge."

"For although it is a new and difficult road in studying nature, rather to question things themselves than, by turning over books to discover the opinions of philosophers regarding them, still it must be acknowledged that it is the more open path to the secrets of natural philosophy, and that which is less likely to lead into error."

"Nor is there any just cause wherefore the labor should deter any one, if he will but think that he himself only lives through the ceaseless working of his heart? Neither, indeed, would the way I propose be felt as so barren and lonely, but for the custom, or vice, rather, of the age we live in, when men inclined to idleness, prefer going wrong with the many, to becoming wise with the few, through dint of toil and outlay of money. * * * When we acquiesce in the discoveries of the ancients, and believe (which we are apt to do through indolence) that nothing farther remains to be known, we suffer the edge of our ingenuity to be taken off, and the lamp which they delivered to us to be extinguished. * * Truly in such pursuits it is sweet, not merely to toil, but even to grow weary, when the pains of discovering are amply compensated by the pleasures of discovery. * * * It were disgraceful, therefore, with this most spacious and admirable realm of nature before us, and where the reward ever exceeds the promise, did we take the reports of others upon trust, and go on coining crude problems out of these and on them hanging knotty and captious and petty disputations. Nature is herself to be addressed; the paths she shows us are to be boldly trodden; for thus, and whilst we consult our proper senses, from inferior advancing to superior levels, shall we penetrate at length into the heart of her mystery."

There is much more in the same lofty vein in this Introduction. I quote this much to whet the appetite of those who can possess his works, and to give to those who cannot, a taste of the writings of him who is thus referred to by Mr. Luther Holden in the last Hunterian Oration:

"As English sailors were proud of Nelson, English soldiers of Wellington, English poets of Shakespeare, English physicians [were proud of] Harvey."

Of all the departments of medical study, none were so early or so thoroughly pursued as anatomy. Before Harvey went to Padua under Fabricius, anatomy had already been developed to a degree hardly surpassed to this day, by such illustrious students as Jacobus Carpus at Bologna, Jacobus Sylvius at Paris, Vesalius at Padua, with Columbus, Eustachius, Fallopius, and Paré, whose names enter into the nomenclature of the science. After spending five years in enthusiastic study in such a school, it was to be expected that he would devote himself to anatomy as a life-long pursuit. We wonder at and admire the boldness and certainty of his obstetrical and gynæcological practice. He became the teacher of his own and succeeding ages in these departments only through his thorough familiarity with the anatomy of the region and organs he had to practice upon. Those who wish to impress upon students the value and importance of a thorough knowledge of anatomy can find no example in the annals of medicine which so perfectly illustrates these as the life and work of Harvey.

In his work upon Generation are found many experiments and observations. They are chiefly with reference to the development of the chick. They illustrate his powers of observation.

I believe that he first pointed out the development of the chick from the cicatricula, which he describes as follows:

> "There is a white and very small circle apparent in the investing membrane of the vitellus, which looks like an inbranded cicatrice, which Fabricius therefore calls cicatricula; but he makes little of this spot. * * The cicatricula in question is extremely small, not larger than a tiny lentil, or the pupil of a small bird's eye, white, flat and circular. This part is also found in every egg. * * If you sometimes find two cicatriculæ in a large yelk, * * this might perhaps lead to the production of a monster and double fœtus. * * It is, in fact, the most important part of the whole egg, and that for whose sake all the others exist; it is that, in a word, from which the chick takes its rise." (Works of Harvey, Sydenham Soc. Ed., p. 215.) See also p. 396, bottom, and p. 407.

He touches upon and expresses very clearly his ideas of spontaneous generation in these words:

> "Moreover, they who philosophize in this way [*i. e.*, seek for the cause of diversity of parts in diversity of matter whence they arise] assign a material cause for generation, and deduce the causes of natural things either from the elements concurring spontaneously or accidentally, or from atoms variously arranged; they do not attain to that which is first in the operations of nature and in the generation of animals, viz.: they do not recognize that efficient cause and divinity of nature which works at all times with consummate art, providence and wisdom, and ever for a certain purpose, and to some good end; they derogate from the honor of the Divine Architect, who has not contrived the shell for the defense of the egg with less of skill and of foresight than He has composed all the other parts of the egg of the same matter, and produced it under the influence of the same formative faculty." (Op. cit., p. 207.)

He comments with much quaintness and beauty of illustration upon the physiognomy of eggs, and asserts that

> "We should not, therefore, be greatly surprised, when we see those who have experience, telling us by what hen each particular egg in a number has been laid."

He shrewdly adds:

> "I wish there were some equally ready way from the child of knowing the true father." (Op. cit., p. 219.)

The order of nature in the development, life, and decay of the individual and the perpetuity of the species, is thus beautifully sketched:

> "Of the growth and generation of the hen's egg enough has already been said; and we have now to lay before the reader our observations on the procreation of the chick from the egg--a duty which is equally difficult, and profitable, and pleasant. For in general, the first processes of nature lie hid, as it were, in the depths of night, and by reason of their subtlety escape the keenest reason, no less than the most piercing eye."

> in the eighth month, it is possible for the infant to live.' " "There are, however, some animals in whom there is no fixed time for production, and this is chiefly the case with those which are called domestic, and live with the human species. These both copulate and produce their young at uncertain seasons, and the reason probably is to be sought for in the larger quantity of food they consume, and the consequent inordinate salacity. But in these, as in the human species, the process of parturition is often difficult and dangerous."

Unusually early births and instances of prolonged gestation are related. Vesalius relates that "a girl of his time, who, although a five-months' child, had arrived at the age of twelve years." Another, a male, was born at the commencement of the sixth month, "and his frame was so slight and fragile that his mother found it necessary to wrap him up in cotton until such time as he was able to bear the ordinary dress of infants." Of late births, instances of eleven and thirteen months' utero-gestation are given :

> "There was, indeed, not so long since, a woman in our own country who carried her child more than sixteen months, during ten of which she distinctly felt the movements of the fœtus, as, indeed, did others, and at last brought forth a living fœtus."
>
> "These are rare contingencies," he adds, and further says, that "it is impossible to deny that many women, either for purposes of gain, or from fear of punishment, have simulated pregnancy, and not hesitated to swear to the truth of their assertion; others, again, have frequently been deceived, and fancied themselves pregnant, whilst the uterus has contained no product of conception."

Instances of superfetation in his own practice are related, and others quoted from Aristotle. One of the latter was of a woman who "became pregnant of twins, and conceived another by superfetation." The twins were well formed, and came to full term, but the third conception was at the fifth month, and died immediately. He also had experience of cases of death of fœtus in utero, the fragments of which came away months afterwards. He relates one remarkable case of "a noble lady who had borne more than ten children, and in whom the catamenia never disappeared, except as a result of impregnation." After her second marriage she supposed she was pregnant, and declared that she felt the movements of the fœtus. Her symptoms proved to be due to "flatulency and fat."

The duration of gestation is thus quaintly stated :

> "Prudent matrons, * * as long as they note the day of the month in which the catamenia usually appear, are rarely out of their reckoning, but after ten lunar months have elapsed, fall in labor, and reap the fruit of their womb the very day on which the catamenia would have appeared, had not impregnation taken place."

In discussing the causes of labor, he, as Willis says,

> "Throws out the first hint of the true use of the lungs. Hitherto the lungs had been regarded as surrounding the heart for the purpose of ventilating the blood, and tempering or modulating its heat, the heart being viewed as the focus or hearth of the innate

heat, and Harvey himself generally uses language in harmony with these ideas; but in one instance, the lightning of genius giving him a glimpse of the truth, he says: "Air is given neither for the cooling nor the nutrition of animals, * * * it is as if heat were rather enkindled within the fœtus (at birth) than repressed by the influence of the air.' "

He regards the causes of labor as two-fold: the full development of the fœtus, and a corresponding development in the uterus, so that it is at length excited to cast out its contents. These, he thinks, are most naturally thrown off entire, "like the ripe fruit which drops from the tree without scattering its seed before the appointed time."

Harvey's observation of midwives was not unlike what is often seen in these days. He says:

> " Midwives are so much to blame, especially the younger and more meddlesome ones, who make a marvelous pother when they hear the woman cry out with her pains and implore assistance, daubing their hands with oil, and distending the passages, so as not to appear ignorant in their art, giving, besides, medicines to excite the expulsive powers, and when they would hurry the labor, retarding it and making it unnatural, by leaving behind portions of the membranes, or even of the placenta itself, besides exposing the wretched woman to the air, wearying her out on the labor-stool, and making her, in fact, run great risks of her life."

Two classes of labor are described—natural and unnatural. The first is when both mother and fœtus "perform their proper parts [so] that a safe and genuine labor results." Unnatural labors are either premature or delayed, "when a difficult or tedious labor is the result," when dangerous symptoms result, or the powers of the mother fail, "or from sluggishness on the part of the fœtus in making its way out."

A case of unnatural labor was related which was evidently one of uræmic coma, and consequent inaction of all voluntary muscles. He attempted to excite sneezing by "a powerful sternutatory," after other efforts had proved unavailing for the purpose. This last effort to excite the sneezing had the effect to excite a convulsion, during which a living child was expelled, but the mother did not recover from the state of coma.

From what I have quoted, it is seen that he thought the fœtus took an active part in labor. To the objection that would be made in cases where the fœtus was dead, he says that the "waters, * * by their putrid and acrimonious nature, stimulate the uterus to expel its contents." So strongly is he impressed with the idea of the agency of the fœtus in bringing itself into the world, that he says:

> " When we chiefly depend upon the fœtus as being lively and active to accomplish delivery, we must do our best that the head escape first; but if the business is done by the uterus, it is advisable that the feet come foremost."

I quote this as showing his readiness to perform podalic version, and that he made efforts to alter the position in cases of mal-presentation. The case he relates to confirm his idea of the remarkable power of the child in effecting its escape is of interest, though it only shows how strong are the expulsive efforts, and that it was a remarkably favorable termination of a very unpromising case. He knew a woman who, in a difficult labor, had

> "The whole length of the vagina so torn and injured that subsequently, after she had again become pregnant, not only did the parts in the neighborhood of the nymphæ, but the whole cavity of the vagina as far as the orifice of the uterus, became adherent; this went to such an extent that coition became impossible, nor could a probe be passed up, nor was there any passage left for the natural discharges." * * * During labor, "the whole space was burst through, and a vigorous infant born."

The patient ultimately recovered her health and it is intimated that she bore other children.

Yet he recognizes the action of the uterus as contributing to delivery. He had under observation a patient who was suffering from complete procidentia of the uterus. He replaced it and kept it in place for a time by the use of "pessaries and bandages." But after a time it recurred, and at length she became pregnant. The enlarged uterus "hung down as low as her knees. She aborted a fœtus 'a span long.'" He says of this case:

> "I have mentioned the case on this occasion to show that it was the uterus alone which excited the abortion, and expelled the fœtus by its own efforts."

The physiological evolution and involution of the uterus he comments upon in a strain of poetic and reverent eloquence (pp. 540–1). He points out the importance to the women of the regular and perfect performance of the functions of the generative organs, how the health of some is established by marriage, and how "want of action on the part of the uterus exposes the body to various ills. For the uterus," he adds,

> "is a most important organ, and brings the whole body to sympathize with it. No one of the least experience can be ignorant what grievous symptoms arise when the uterus either rises up or falls down, or is in any way put out out of place, or is seized with spasms; how dreadful then, are the mental aberrations, the delirium, the melancholy, the paroxysms of frenzy, * * * all arising from the unnatural states of the uterus."

The boldness and thoroughness (so to speak) of his practice is shown in his management of a case of abortion, caused by fever and great prostration, and which was followed by a condition of collapse:

> "Finding the uterine orifice soft and open, and the lochia very offensive, I suspected," he writes, "that something was undergoing decomposition within; whereupon I introduced the fingers and brought away a 'mole,' of the size of a goose's egg, of a hard, fleshy, and almost cartilaginous consistence, and pierced with holes, which discharged a thick and fetid matter. The woman was immediately freed from her symptoms, and in a short time recovered." (P. 545.)

He concludes his essay on Parturition by relating the case of a soldier's wife who, accompanying the army on the march, being taken in labor as it halted near a river,

> "retired to a neighboring thicket, and there, without the aid of a midwife or any other preparation, gave birth to twins; after she had washed herself and them in the running stream, she wrapped the infants in a coarse covering, tied them on her back, and the same day marched barefoot twelve miles with the army, without the slightest harm ensuing.

He refers to Cæsarian section with familiarity and says:

> "I have often seen the fœtus extracted alive from the uterus, when the mother had been dead some hours."

Again he says (p. 570):

> "In the Cæsarian section, when the embryo is still enveloped in the chorion, I have often found the umbilical arteries pulsating, and the fœtus lively, even when the mother was dead and her limbs stiffened."

From these references I infer that he had a large obstetrical practice, either private or consulting, and that he was ready for any emergency. These references also confirm what I have previously referred to, viz.: the value of thorough anatomical training. It lies at the foundation of medical no less than of surgical practice. No man is born an anatomist. But by diligent study of the subject the physician may practice his profession with a zeal and confidence that insure success, being "bold in security, cautious in time of danger, avoiding impracticabilities."

I have already exceeded the limits I proposed for this paper. It would be of interest and value to more fully call to mind Harvey's many and valuable contributions to the subjects of obstetrics and gynæcology. We find that he was far in advance of his age. Many things that he observed and practiced afterwards fell out of mind and use, to be revived in later years, and perhaps to be vaunted as new discoveries.

"For out of the olde feldis, as men saith,
  Comith all this newe corne, fro yere to yere;
And out of old bokis, in good faith,
  Comith all this newe science that men lere."

DISCUSSION.

Dr. Segur said that he was very much obliged to Dr. Stuart for the very interesting exhibit he had made of Harvey's knowledge of the subject of obstetrics. The suggestion that Harvey had a large obstetric practice, he would add, was very probably correct, for he remembered, in reading a life of John Hunter, the statement that Harvey was very largely engaged in obstetric practice in his time. There are a number of points of interest in the paper, and he would seek an early opportunity to read Harvey's work on Parturition. There is one question suggested by the paper, and the Society would doubtless like to hear Dr. Stuart's answer.

As he understood the paper, Harvey taught that the delivery of the child was due partly to the action of the uterus and partly to the action of the child. He thought the Society would like to know what Harvey taught was the part of the child in the delivery. There was a sense, of course, in which this teaching would be accepted at the present day, and it had occurred to him that that was the sense that Harvey intimated. But he thought that a further explanation would bring out that point, because Dr. Stuart had said that Harvey, in explanation of the delivery when the fœtus was dead, said that the irritating fluids or liquids then took the place of the child, and caused the uterus to act. This foreshadowed, of course, a much later doctrine, and in fact the present doctrine, of the reflex action of the uterus in parturition. What was the precise way in which the fœtus was operative in delivery, according to Harvey?

Dr. Stuart replied that there were so many points that Harvey brings up that he could not even touch on more than a very few of them. In regard to the question raised by Dr. Segur, the Society would remember that he had said that Harvey taught that there was a preparation on the part of the mother as well as a preparation on the part of the fœtus to labor. The preparation on the part of the mother was described, and in regard to the fœtus, it "dove down"—the very expression used by Harvey—and really made efforts with its hands and feet to liberate itself. Harvey's language was very graphic with regard to this point—as if the fœtus were struggling to get out; and the picture is of one crawling about in the uterus to find where the outlet was, and then trying to get out through it. But Harvey recognized, of course, what Dr. Segur had stated as foreshadowing the modern idea of the reflex action of the uterus. The cases quoted showed this. One part of Harvey's treatise he had not touched upon at all, that was very interesting to him—the limits of his paper had prevented it—which was, the subject of the various membranes, the fœtal membranes, which those who may read Harvey will find very interesting and instructive.

THE RECOGNITION AND REMOVAL OF FOREIGN BODIES FROM THE CORNEA.

BY J. D. RUSHMORE, M.D.

During the year 1880 there were treated at the Brooklyn Eye and Ear Hospital one hundred and seven patients with foreign bodies in one or both corneæ; besides these, a few (10) were suffering from irritation produced by foreign bodies already removed, and a certain small number of ulcers of cornea were produced by foreign bodies. In numerical importance this class of cases stands fifth on the list of diseases of the eye, the affections exceeding it in number being catarrhal conjunctivitis (216), sub-acute and chronic conjunctivitis (203), phlyctenular conjunctivitis (124), and phlyctenular keratitis (116).

While, however, this class of cases takes a low position in the list mentioned, and while these bodies are frequently easily removed, they nevertheless assume a position of first importance from the occasional difficulty of recognition and removal, from ulceration of the cornea, and subsequent corneal opacities; from iritis and deeply-seated inflammation in the uveal tract, and (rarely) from the loss of the eye.

It is entirely beyond the scope of this note to take up the considerations of the various results produced by a foreign body in the cornea; my only object is to call attention to the importance of using, with all possible care, the methods for detecting a foreign body in the cornea, and to emphasize the importance of employing that method of removal which gives the least possible pain to the patient, and is followed by the least possible injury to the cornea. These results are secured by the method described in part in Bader's work, "The human eye," but unmentioned, or spoken of as of inferior value, in several of the modern and most popular text books on ophthalmology. Of the cases previously mentioned of foreign bodies in the cornea about eighty-five per cent. were males; all—with the exception of one child five years old—were over sixteen years of age, most of them adult males; in almost all cases one eye was affected, in a single case the affected eye was the only one, the fellow eye having been lost some years before by panophthalmitis following an injury; in nearly every case the foreign body was iron or steel, in all cases the foreign bodies were removed. The method of detecting these foreign bodies is usually easy of application and satisfactory. We need a bright light, either natural or artificial, shining directly or obliquely into the patient's face, the character and direction of light being determined, in part, by the habit of the examiner, and also by the tolerance of the eye under examination. Lifting the upper lid sufficiently to expose the cornea, but not further, the foreign body, in the majority of cases, is easily seen, especially if dark in color and of recent introduction. We are hardly likely to mistake anything for the foreign body except minute pigment patches on a light colored iris, and these are recognized as such, and located behind the cornea and not on it, by directing the patient to roll the eye obliquely in almost any direction, when their true position is made out.

The difficulty of recognition is not in differentiation, but in detection. The causes of failure are either an insufficient quantity of light, a photophobic eye, the small size of the object, or its light color, the presence of ulceration in the cornea, a dark iris or a dilated pupil (when the foreign body is of dark color). Sometimes light colored specks of sand or glass are blown or thrown into the eye ; in such a case a probe brought into contact with the supposed object will detect it by the gritty feel; if it is of vegetable origin or a bit of straw, a moistened camel's hair brush will recognize, and, at the same time, remove it. These cases of foreign body in the cornea are constantly occurring to every practitioner, and are about twelve times as frequent as foreign bodies in or on the conjunctiva. The directions for their removal, as given in the standard text-books on ophthalmology (with perhaps one exception), are calculated to inflict an unnecessary amount of pain on the patient. Let me quote. Wells says: "As a rule I always prefer to keep the eyelids apart with the stop speculum, and to fix the eye with a pair of forceps," but he admits that this causes some degree of pain, counterbalanced, however, by the control it gives of the eyes. Carter says: "A surgeon who does not often operate upon the eye, and who wishes to remove an imbedded foreign body from the cornea of a sensitive person, will save both time and pain by placing the patient in the recumbent posture, separating the lids with speculum and fixing the eye with conjunctiva forceps."

Williams suggests the use of a brush or a small stick, such as are used for toothpicks, in cases where the foreign body is only slightly imbedded. In other cases the lids are separated by the finger of the surgeon (standing in front of the patient), who endeavors by quick manœuvres to lift the foreign body from its position, keeping on his guard against sudden movements of the globe, that the instrument may neither scratch the cornea nor be thrust through it."

Wecker, in his ocular therapeutics, says: "In patients who are unruly these fragments of iron may be readily removed by keeping the lids open with a spring speculum and fixing the globe with forceps. It is better to do so than to try and steady the eye by pressure with the finger, for it is simply impossible to do this if the patient is at all nervous."

Stellwag says nothing about foreign bodies in the cornea except as they bear on the etiology of inflammatory troubles.

Dixon very humanely and wisely suggests that the movements of the eye be commanded by placing one finger on the sclerotic, just above the cornea, and the other against the inner side of the globe."

Bader says (I quote in full, and urge the adoption of his direction): "Standing behind the patient, who is seated and rests his head against our chest, we raise the upper lid with the first finger of one hand, and having directed the patient to look down, place the tip of the same finger upon the sclerotic, just above the cornea. We then depress the lower lid with the tip of the middle finger of the same hand, and, at the same time, place it upon the eyeball, near the inner" (or outer) "and lower margin of the cornea." In this way we have complete control of the eyeball, and do away with the use of the speculum and forceps, and inflict little or no pain upon the patient. By a little increase in the pressure (but still not enough to produce pain, we secure two additional advantages, first, a tense condition of the cornea, which does not easily dimple with our efforts at removal when the spud or cystotome becomes necessary; and, secondly, an anæsthetic condition of the cornea. Anæsthesia of the cornea is very well known as a symptom of glaucoma, the essence of which is an increase in the tension of the eye, produced by pressure from within; it occurred to me that a similar condition could be produced by pressure from without, and for that purpose I made the trial on some two dozen patients, whose eyes were free from any corneal irritation, and found in every case the same testimony as to the less amount of pain produced when the cornea was touched with a probe while the globe was under pressure than without. Sulphate of atropia has an anæsthetizing effect on the cornea, and until recently I had been in the habit of instilling a drop or two of a solution into the eye (two grains to the ounce of water), after locating the foreign body and before removal, and found it advantageous to the patient in diminishing pain, but objectionable on account of the blurring of the sight for several days, and on account of the occasional difficulty in recognizing the foreign body against the dark background of the dilated pupil. If the foreign body is of light color the dilatation is desirable. The use of firm pressure renders the atropine unnecessary as an anæsthetic. I have never found general anæsthesia necessary in this class of cases except in a child.

With the eye fixed, and the cornea made as anæsthetic as possible by pressure, the only thing remaining is to remove the foreign body. This is done in one of three ways:

First, by the use of a small piece of wet cotton on a cotton carrier, swept with a rotating motion gently over the cornea, producing no pain and removing all bodies lying upon or loosely attached to the cornea (a method suggested by Dr. C. R. Agnew, of New York, in a clinical lecture reported in the *N. Y. Med. Rec.*, Aug. 7, 1880).

Secondly, by the employment of the magnet, which, as I have used it during the past four or five months, has given me a good deal of satisfaction. The instrument used is a modification of a magnet devised by Dr. Gruening, of New York, and described in the *N. Y. Med. Rec.*, May 1, 1880, for the removal of particles of steel or iron from the vitreous chamber. I have found it of value in removing these small iron or steel particles from the cornea.

If the cotton and magnet fail, a resort to the cystotome, after a trial and failure with the spud, has been found necessary. With this, little or no harm to the cornea need be inflicted, although it is a scratching instrument. In some cases we need concentrated light, which can be obtained by a strong double convex lens, held by our unemployed fingers, if skillful, or better by an assistant, and in a few cases the use of a double convex lens, of about six or eight inch focus, placed in a trial frame for spectacles, will magnify a very small foreign substance sufficiently to make its removal easy.

The modification mentioned of Dr. Gruening's magnet is rather convenient than important. His magnet, as now made, has a flat point at each end in order to take advantage of the polarity of the magnet, for it is found that these small particles of steel and iron, by hammering and friction, become magnetized. I have simply had a magnetized spud, a magnetized Graefe's cystotome, and a cotton carrier added to the case.

As this note relates simply to the recognition and removal of foreign bodies in the cornea, I shall not consider the after treatment of these cases.

DISCUSSION.

DR. PROUT observed that Dr. Rushmore had covered almost all the ground necessary in his paper. There was one little point to which he would call attention. He had been so unfortunate in removing one of these foreign bodies as to have inflammation subsequently set in in the eye; but the patient was not in very good condition, and did not have very good hygienic surroundings. Where a foreign body was in the cornea there was danger of perforation and escape into the interior chamber. In working on the eye from the outside to remove a piece of steel or metal, there was a possible danger of perforation. Patients. in some cases, have to pass a night with the foreign body in the eye before it is removed. He recollected such a case – that of a boy at the hospital. But such cases did not often occur. As to the method suggested by Dr. Agnew, he had found it extremely useful. A question suggested by a recent experience of his was, how to recognize the total absence of the cornea—an experience that Dr. Rushmore had also had. He had treated a case of conjunctivitis at the Eye and Ear Hospital for four months, when he had recognized the fact that there was absolutely no cornea left.

DR. MATHEWSON said that he had been interested in seeing whether the little magnet referred to by Dr. Rushmore would have any effect upon oxidized metal, iron or steel. It seemed to act very well. These cases are the most common that we have—where the speck on the cornea is one of iron or steel, often quite minute, which oxidizes pretty readily under the action of the tears. Often want of experience in these cases leads to unnecessary and injudicious interference with the cornea, where the speck is all oxidized and has simply left a stain upon it, which will soon relieve itself. It is better to leave it alone than to attempt to pick away the stain. He had often recognized that it was simply a stain in these cases of little specks of steel, from the fact that he could see a colored ring with a lighter centre. He entirely agreed with Dr. Rushmore and Dr. Prout as to the very ingenious method suggested by Dr. Agnew. He had hardly used anything else in these cases—that is, the removal of foreign bodies by the cotton. He also agreed with those gentlemen in reprobating the unnecessary and dangerous method of using the speculum and the forceps. The fingers, he had found, were all that was necessary, and were preferable to other means.

DR. SCHWARZENBERG thought that in the treatment of foreign bodies in the cornea, the principal thing to be considered was whether they were loose or not. If they were loose, you could employ almost any means to remove them; but if they stuck very fast, he thought the only way was to use the cataract-needle.

DR. WILLSON said he would like to ask Dr. Rushmore what his experience had been with the eye-stone. We frequently see it used. He had heard of two cases in New York where very serious trouble had resulted from its use.

Dr. Rushmore replied that he had not known of any trouble being produced by the eye-stone. If a proper one was used, one with smooth surface, by the closure and opening of the lid, it seemed to be pushed along to the inner canthus. He had never seen or had any trouble with it, but did not recommend it.

Dr. Rushmore further said, in reply to a question, that delay in seeking treatment might be harmful in that the swelling that takes place may mask the body. And yet, on the other hand, where that is present, in some cases it occurs not over or around the body, but underneath it, and he had seen it rather bring out the foreign body. But usually, the longer the delay, the more difficult he thought it was to recognize the body, and up to a certain point he thought this true with reference to its removal as well. During the first few hours he had found it easier to remove the foreign body with the magnet than after ten or twelve hours. But also after ulceration and the body has become somewhat loosened, then he found that the magnet acted again. He has been surprised to see how little power the magnet had over bodies that were lying so loosely on the cornea that they could be moved from side to side, but owing, perhaps, to adhesion by the mucous they could hardly be removed. Due allowance must be made for the temperature of the foreign body. For instance, a spark of highly-heated metal entering the eye is less influenced by the magnet, and in some cases perhaps this is the explanation of the difficulty in removing it.

THE MEDICAL SOCIETY OF THE COUNTY OF KINGS.

The regular monthly meeting of the Society was held March 15th, 1881, the President, Dr. Charles Jewett, in the chair, and about forty members present. The minutes of four meetings were presented, and the omission of the name of Dr. G. Rankine White from the Active List, reported at the January Meeting, having been corrected, they were adopted.

Nominations to membership: Dr. E. H. Bartley, 386 Pacific Street, by Dr. Hunt; Dr. F. Fuller, 57 Putnam Avenue, by Dr. Curry; Dr. Josephine A. Dupré, 17 Clinton Street, by Dr. Hughes.

The Council reported the acceptance to membership of the following duly nominated candidates: F. R. Newman, M.D., University N. Y. Med. Col.; C. E. Gunther, M.D., L. I. C. H., 1880; M. W. Barnhart, M.D., University N.Y., 1879; W.F. Crutchley, M.D., Col. Col., D. C., 1870. And later in the meeting the President declared the following to be duly elected: Drs. H. A. Fairbairn and H. L. Cochran.

The first paper of the evening was read by Dr. F. H. Stuart, on "The Obstetrics and Gynæcology of William Harvey, M.D."

Remarks upon the paper were made by Dr. B. A. Segur, and Dr. Stuart responded.

The paper of Dr. J. D. Rushmore, on "The Recognition and Removal of Foreign Bodies from the Cornea," was then read. It was discussed by Drs. Prout, Mathewson, Schwarzenberg and Willson, and Dr. Rushmore, in replying to questions raised by members, closed the discussion.

The Memorial Committee, appointed to report to the Society respecting the death of our late fellow-member, Dr. J. H. L. Elmendorf, presented the following Obituary Note, which was read by the Secretary:

JAMES L. H. ELMENDORF was born at Hyde Park, N. Y., in 1843. His father, Rev. Anthony Elmendorf, of the Dutch Reformed Church, removed to Brooklyn with his family in 1847 to establish the North Dutch Reformed Church.

James entered the Sophomore Class of Rutgers College, N. J., from the Brooklyn Polytechnic Institution in 1860, and graduated in 1863; got his medical education in New York and Brooklyn, attending one course at the Twenty-Third Street School, N. Y., and receiving his doctor's degree from the Long Island College Hospital in 1866.

Opening an office immediately in Brooklyn, he acquired a large practice in a shorter time than is the fortune of most young physicians. He had a remarkably large clientage in the families of his father's parishioners, with whom he had grown up – a rather unusual bestowal of confidence, and certainly a testimony to excellence of character, which drew to him that part of the community usually the last to acknowledge one's competency. Rev. Dr. Elmendorf died a few months before his son began practice.

Dr. Elmendorf loved his profession, and devoted himself to study and practice enthusiastically. He was elected to this Society soon after graduation; he very early joined the Pathological Society, and was an active member of the Anatomical and Surgical Society from its formation. He always gave much time to histological research, and would have been better known than he is in our own Society had not serious illness, which began in 1871, and prostrated him for many months at different times, sapped his strength and palsied his resolution. His health was never fully restored, and at several times during the last nine years he was cut off for weeks and even months from professional work. Parts of several summers spent in the Adirondacks produced temporary improvement; but during the last year he failed considerably in vigor, and early in December developed a troublesome bronchitis, upon which pneumonia supervened on the 18th, which was fatal on the morning of December 25th.

Our friend had many of the best characteristics of the true physician. He was thoughtful, observing, self-reliant, earnest and true. He brought to the service of his patients all the learning that was to be expected of his years, and he rapidly utilized his experience as time went on. He had the quality of self-reliance which inspires confidence, while he had no hesitation in seeking advice if he found his own experience inadequate to the occasion. He was possessed of an enthusiasm without which the physician can never rise above mediocrity, which carried him forward in every enterprise in which he was engaged. He was the very soul of honor in all his professional relations, whether with patients or physicians, as he was instinctively and conscientiously true to all his obligations. An invariable courtesy marked his intercourse with all, and a womanly purity pervaded his whole nature. He was a dutiful son, a loving husband and father, a faithful friend.

He was married in 1866 to Mary, eldest daughter of John P. Elwell, of this city, and has left her and three sons to maintain the honor of his name.

WM. HENRY THAYER, M.D., }
L. T. EMERY, M.D., } *Committee.*
A. W. CATLIN, M.D. }

March 15th, 1881.

The above report was accepted and ordered to be placed upon the Minutes.

THE PRESIDENT, for Dr. J. A. Jenkins, presented to the members a number of copies of the printed Memorial of the late Dr. W. F. Sanford.

THE PRESIDENT appointed the following standing Scientific Committees:

On Surgery, Drs. Rushmore, Wight, Fowler, Skene, Rockwell.

On Therapeutics and Clinical Medicine, Drs. McCorkle, Squibb, Hutchins, Segur, Thayer.

On Obstetrics, Drs. Stuart, A. S. Clarke, E. Palmer, Wallace, Vanderveer.

DR. PROUT, on behalf of Dr. Snively, presented a history of the case of the late Engineer Whittaker, U. S. N., whose death had been alleged by the public press to be due to vaccination:

MEDICAL DEPARTMENT U. S. T. S. MINNESOTA,

New York, March 14th, 1881.

DEAR DOCTOR: Your note received. I enclose the official record in case of Mr. W. He was vaccinated with bovine obtained by the Surgeon-General, U. S. N., from the New England Vaccine Co. He was vaccinated about the 11th of February successfully. The scab had fallen and wound nearly well. He was a man who suffered much from malaria in several forms; had a febrile attack about six weeks ago. About the 26th of February, when not feeling well, he came from his home to the ship through a severe northeast rain storm. He was soaked to the skin. That night he had a chill, followed by fever. The next day the cicatrix, now almost healed, commenced to inflame. It made little progress at first, but gradually extended as you found it. I tried to get him out of the ship, the air of which I knew was injuring him, three days before he went; in fact, as soon as he had the chill and before the erysipelas set in. But he declined to go, and being an officer of high rank, his wishes were respected, much to my regret. I can't think the disease was caused by vaccination, as the vaccination had progressed too far before the disease set in, the inflammatory stage having passed; but had the vaccination not been there he might have escaped the disease. I have had no other cases, but the Powhattan, lying near us, had one fatal case some weeks ago. If I can give any other information please let me know. I have vaccinated probably 5,000 men and boys, and this is the only case of erysipelas or disease of any kind from it.

Very truly yours,

EDW. KERSHNER, *Surgeon.*

Copy of entries in Medical Journal in case of Chief Engineer James Washington Whittaker, U. S. N., recently deceased.

March 1st. Whittaker, James Washington, Chief Engr., æt. 48. Entered service 1857. Febricula, originating in line of duty from exposure to local climatic influences. Feverish; muscular pains; headache. Symptoms rather severe and presented themselves yesterday forenoon. Rainy weather and consequent damp and deficiently ventilated ship were probably factors in causation.

March 2d. Whittaker, Chief Engr.—Febricula. Pain in lumbar region quite severe. Considerable cephalalgia. Temp., 10 A. M., 101°. Left arm very much inflamed from recent vaccination. Anorexia. Less headache than yesterday. Bowels costive.

March 3d. Whittaker, Chief Engr. No fever; headache and lumbar pain much moderated. Left arm very inflamed and painful; inflammation erysipelatous in appearance.

March 4th. Whittaker, Chief Engr. Not much constitutional disturbance. Condition of arm no better; erysipelatous inflammation extends from elbow to shoulder; whole circumference of arm involved. Surface of skin exteriorly covered with blebs.

March 5th. Whittaker, Chief Engr. At home.

March 6th. Whittaker, Chief Engr. At home.

March 7th. Whittaker, Chief Engr. At home ashore.

March 8th. Whittaker, Chief Engr. Febris—sick leave.

March 9th. Whittaker, J. W., Chief Engr. Erysipelas. No improvement in the condition of the arm. He is under the care of Dr. Snively, of Brooklyn.

March 10th. Whittaker, J. W., Chief Engr. Erysipelas. Information was received this morning that Mr. Whittaker grew worse during the early part of the evening, and died about 10 o'clock P. M.

The Society then adjourned.

ʼΑσϰληπιὸς ʽο Σωτὴρ

Χαρμα μέγʼ ανθρωποισι, ϰαϰων θελϰτῆρʼ οδυναων.

Hymns of Homer, No. XVI.

PROLIFERATIONS.

——THE SUBSCRIPTIONS TO VOLUME V. of THE PROCEEDINGS received since the March number will be found acknowledged on page 66. The total to date constitute but a fraction of the medical men who receive THE PROCEEDINGS regularly, and who might naturally be supposed to feel an interest in its success. The TWO DOLLARS for each subscriber is a small matter, but the aggregate of a general subscription would be of great assistance to the COUNCIL in carrying on this work. The money may be handed to any member of the COUNCIL, or with Capt. Charters at the Rooms, and the usual acknowledgment will be made. The COUNCIL still hope that this matter will not be neglected through forgetfulness or indifference.

——A NEW HOSPITAL.—Mr. George I. Seney has given the handsome sum of $270,000 for another general hospital, to be located in the southern section of this city. An entire block of ground has been secured. The plan of Mr. Seney contemplates the erection of a number of small buildings rather than a single large one, so that particular diseases may be located and treated apart. Possibly one of these buildings may be made a lying-in department, for which there is ample room; another may be devoted to contagious disease, for which at present there is absolutely no provision within the city limits. The plans will be matured and work begun within a few months.

——La Independencia Médica.—A new exchange, bearing the above title, comes to us from the city of Mexico. It is conducted by Dr. Fernando Malanco, of that city.

——Nitro-glycerine has been exploited by Dr. Murrell, of London, as a remedy for angina pectoris and neuralgia. More recent experimenters with this drug, however, declare it to be dangerous, by reason of its occasional intense depressant action.

——An Unpublished Letter of Jenner, on lymph collection and the general management of vaccine, was read recently before the Epidemological Society of London, by Dr. William Squire. It appears in full in the *British Medical Journal*, February 12.

——Aneurism of Aorta Cured.—Dr. R. S. Sutton reports in the *American Journal of Medical Sciences* the cure of an aneurism of the descending curve of the arch by a treatment, covering fifteen months, of absolute rest, restricted diet, ergot and potassium bromide. The patient, at the end of that time, was greatly emaciated and anæmic, but his aneurism was not to be found.

——Mr. Leypoldt, the brave publisher of the *Index Medicus*, has addressed a note to the physicians of this city and vicinity, asking their support of that great and worthy bibliographical journal. To the medical professor and the studious physician this *Index* is of inestimable value. Listen to the opinion of Dr. Frank H. Hamilton :

"I do not find words to tell you how much I value your *Index Medicus*. If I could have had it when I commenced the study and practice of medicine, it would have saved me several years of labor, and have added so much to my life. To any medical student it is economy of time and of money, nor can I see how it can be improved."

The address of that publication is Nos. 13 and 15 Park Row (P. O. Box 4295), New York City.

——The Peabody Donation Fund, given about sixteen years ago for the improvement of the dwellings of the poor of London, amounts now to nearly four million dollars. It has increased fifty per cent., by accruing interest and rents, over the original gift. Last year there were 9,899 persons housed in these improved buildings. Other buildings will be completed this year, sufficient to house 760 more families, and increasing the number of apartments to about 3,000, and the aggregate population of the Peabody buildings to 13,500 persons. The average weekly earnings of the heads of families was about six dollars, and the average rent was a little over one dollar per week for each apartment. The death-rate in these buildings is stated at 19.7 per 1,000 of their population.—*Lancet*, Feb. 19.

——In Diphtheria the remedy latest proposed in the German medical press is pilocarpin. The excessive flow of the buccal secretions, characteristic of this drug, has the effect of undermining, loosening and favoring the expulsion of the membrane. To those who believe that the presence of the membrane favors the absorption of septic elements into the blood, this proposed treatment will appear reasonable and worthy of trial. But how will it be in regard to the depressant action of the drug; will not this effect more than counterpoise the supposed value of the easy and non-disturbing removal of the membrane? By general consent, local medical practice relies at present far less upon active medication than formerly, and far more upon supporting and stimulating methods. However, it may appear proper in some cases to take advantage of the alleged power of pilocarpin to flush away the septic deposit.

——Milk in London.—A sanitary association in London has been founded, with a large capital, with the object of securing pure milk. Physicians are largely interested in the venture, which already has been made a financial success. An inspector makes a regular and frequent analysis of the milk, although the dairy itself is under constant sanitary supervision. In this way they aim to protect themselves from the occurrence of "milk typhoid" epidemics, such as have been frequently noted of late in the English towns.

——The gratitude of the patient! I know that it is a part of the disease. It is pronounced during the fever, cools down in the convalescence, and is cured when health returns.—*Baudry's Aphorisms.*

——London Physicians are much given to equestrian exercise. They personally accept the prescription ascribed to Lord Palmerston, when he said "the outside of a horse is the best thing for the inside of a man."—*Brit. Med. Jl.*

——An exclusive milk diet will occasionally be accompanied by large accumulations in the rectum of masses of pultaceous and extremely tenacious fœcal matter, removable only by mechanical means. Dr. D. W. Niles, of Worcester, Mass., has recorded some observations of this character, and also some experiments on healthy individuals. In all the cases the physical characteristics of the deposit were the same, of bright yellow color, soft, greasy, exceedingly adhesive, not soluble in water and not removable by cathartics or injections. These observations have shown him that this result will likewise occur when lime water has been given with the milk. Dr. Niles calls attention to the fact that when constipation ensues upon a milk diet, in children or adults, the contents of the rectum should be investigated.

——The Regular Monthly Meetings of the Medical Society of the County of Kings are held at 8 P.M. on the third Tuesday of each month, at Everett Hall, 398 Fulton Street.

The April meeting will be held on the 19th. Papers will be announced on card.

MEDICAL SOCIETY OF THE COUNTY OF KINGS.

OFFICERS AND COMMITTEES FOR 1881.

President....................C. Jewett, M.D., 307 Gates Ave.
Vice-President...............F. W. Rockwell, M.D., 6 Lafayette Ave.
Secretary....................R. M. Wyckoff, M.D., 532 Clinton Ave.
Assistant-Secretary..........J. H. Hunt, M.D., 419 Hart St.
Treasurer....................J. R. Vanderveer, M.D., 301 Carlton Ave.
Librarian....................T. R. French, M.D., 469 Clinton Ave.

CENSORS.

B. A. Segur, M.D., 281 Henry St.
A. Hutchins, M.D., 796 De Kalb Ave.
B. F. Westbrook, M.D., 174 Clinton St.
W. H. Thayer, M.D., 171 Livingston St.
J. D. Rushmore, M.D., 129 Montague St.

DELEGATES TO THE MEDICAL SOCIETY OF THE STATE OF NEW YORK.

(1878 to 1882.)

Drs. J. C. Shaw,
J. D. Rushmore,
C. Jewett,
A. Otterson,

Drs. G. G. Hopkins,
J. S. Wight,
A. Sherwell,
W. Wallace,

Drs. J. Byrne,
B. F. Westbrook,
E. N. Chapman,
F. W. Rockwell.

Chap. XI., Art. 2, of By-laws: "Any Member elected as Delegate to the Medical Society of the State of New York, who shall be unable to act as Delegate during two successive years, shall be considered to have vacated his position as Delegate."

DELEGATES TO THE AMERICAN MEDICAL ASSOCIATION,

To be held in Richmond, Va., May 3, 4, 5 and 6.

Drs. Andrews,
Armor,
G. W. Baker,
Bartlett,
Burge,
Byrne,
A. S. Clarke,
Crane,
Corbally,
Evans,

Drs. Fowler,
Griffiths,
Hutchins,
Hutchison,
L. S. Pilcher,
Prout,
Raymond,
Read,
Rockwell,
Rushmore,
Russell,

Drs. Segur,
Shaw,
Sherwell,
Skene,
Squibb,
Vanderveer,
Walker,
B. F. Westbrook,
H. F. Williams,
Wyckoff.

COMMITTEES OF THE SOCIETY.

HYGIENE.

Drs. B. F. Westbrook, B. Edson, N. B. Sizer.

REGISTRATION.

Drs. W. E. Griffiths,
A. S. Clarke,
J. A. Jenkins,

Drs. W. G. Russell,
N. Matson,
F. W. Rockwell,

Dr. C. H. Potter.

PHYSICIANS' MUTUAL AID ASSOCIATION.

Drs. B. A. Segur,
G. W. Wells,
W. W. Reese,
G. W. Baker,
N. W. Leighton.
A. Hutchins,
C. A. H. Szigethy.

PROCEEDINGS

OF THE

MEDICAL SOCIETY OF THE COUNTY OF KINGS.

VOL. VI. MAY, 1881. No. 3.

NEURALGIA IN INFANCY AND CHILDHOOD.

BY A. JACOBI, M.D.

Reports of cases of actual neuralgia in infancy and childhood are by no means frequent. It is true that the symptoms may not be clear. The examination of infants and children is attended with great difficulty. When there is pain, it is not always easy to find its location. The patients are averse to being examined. The use of the æsthesiometer is an impossibility. Excitement and fear will take the place of real pain when an attempt at examination is made. But there is scarcely a doubt as to the relative scarcity of the cases of neuralgia at that age; particularly, with the exception of intestinal neuralgia, in infancy. In the development of the nervous system the anterior portion of the large centres is developed at an earlier period, and to a greater extent, than the posterior portion. In accordance with this anatomical fact, Soltmann has found, by direct physiological experiments, that the sensitiveness of new-born animals, such as rabbits, dogs, cats, is very inconsiderable, and that it only very gradually develops into its normal condition. Thus it is that, with the exception of visceral neuralgia, not many cases are met with in the first or second year of life. When they do occur they are the result, in many cases, of local changes. Traumatic injuries may give rise to local neuritis, and pain in that locality or at the periphery will be the result. Moreover, many of the cases of neuralgia which at that early period, or even later in life, have been attributed to constitutional causes, are very probably the result rather of a local disorder than of a constitutional influence. For example, the excessive pain met with in young rhachitic children, when taken up from the bed, is not the result of the general influence of rhachitis as such, but in consequence rather of the softening and thickening of the costo-cartilaginous juncture of the ribs and their periosteum. Or the umbilical pain which is now and then met with in children, and also in adults, with extensive pleurisy. It is the result of irritation of the intercostal nerves—produced by the neighboring inflammatory processes—which manifests itself at the peripheral ends distributed upon the surface of the abdomen. Another illustration is the supraorbital and frontal pain which is found frequently in cases of broncho or lobar pneumonia—more in the latter than in the former. It is also due to a local cause, and I will remind you of what occurs in such a pneumonia. A symptom observed very frequently is redness of the cheek on the side corresponding with the pneumonia. This occurs so frequently that it has even been regarded as a pathognomonic symptom. Certainly it is not that; but in many cases it is associated with pneumonia, particularly when the upper lobe is involved, and it is due to the irritation of the sympathetic ganglion in that locality.

In the same way in which the vaso-motor system is influenced, and the flush upon the cheek produced, is the supraorbital and frontal neuralgia—observed in a great many cases—explained.

But there can be no doubt that, in numerous cases, a dyscrasic condition of the blood, such as exists in typhoid fever, or erysipelas, or intermittent fever, or general scrofulosis, or constitutional syphilis, or generalized pneumonia, causes either local or general neuralgia in consequence of malnutrition or irritation of the nervous system. This is easily understood when we recollect the marked changes which take place in the nervous centres, on momentary interruption of the circulation, or in consequence of acute or slow changes in the condition of the blood.

Herpes zoster is a source of very severe neuralgia in the adult. Its usual situation is over the territory of the intercostal nerves, but there are cases in which other nerves are affected. I have seen zoster over the supraorbital, the frontal, the naso-ciliary, the auricular, the lumbo-abdominal, the sciatic, and its ramifications, the occipital. In many of these cases the pain preceding and following the eruption is very severe. Now, herpes zoster is by no means very rare in infants. I will not speak of the herpetic eruptions about the mouth, seen so frequently in common febrile diseases, but only of those cases in which zoster makes its appearance elsewhere upon the surface. I have seen it in all the localities aforementioned, but in only a few of those cases have I seen very intense pain. In some the herpetic eruption made its appearance without any neuralgic symptoms whatsoever. In some a certain amount of itching preceded the eruption. Very rarely have I seen cases in which pain persisted after the eruption had dried within one or two weeks. This affection, certainly, is very much milder in infancy and childhood than in the adult, no matter how young the patients are. For I have seen herpes zoster over the intercostal nerves at seven months, and over the lumbo-abdominal nerves at the age of five months.

Articular neuralgias were first spoken of extensively by Brodie, who published his observations on so-called hysterical affections of the joints in 1822.

It was Berger who first used the term "articular neuralgia." Brodie's cases occurred mostly in adolescent and adult women; but the same affection is not so very infrequent in children. In fact we hear a great deal of pains located in the neighborhood of joints without any apparent or real change in the condition of the joints themselves. A great many so-called growing pains belong to this class, although many, certainly, are rheumatic in character. For, it is the peculiar characteristic of articular rheumatism in children, that it is not so apt to give rise to severe affection of the joints as to rheumatic endocarditis. Not infrequently both the pain and swelling of the joints in acute articular rheumatism of infancy and childhood are so trifling that they are overlooked, and it is only the presence of the valvular disease afterwards which convinces the observer that the slight, so-called growing, pains, were the symptoms of acute rheumatism. But many of the growing pains are decidedly neuralgic, will last a long time, are frequently connected with anæmia, and will disappear with the general improvement of the whole system, and with rest.

Many of the pains about the joints have a local origin. The swelling and hyperæmia of the epiphyses and the ligamentous structures in rhachitis give rise to local irritation of the nerves, and, consequently, to pain. In many of these cases no further change takes place; but in some œdematous swelling dependent on vaso-motor disturbances is noticed at the same time. Some of these cases of neuralgia, with consecutive œdema, have given rise to the mistaken diagnosis of articular rheumatism. If, however, a careful examination of the parts be made, it will generally be found that the swelling is not located in the joints, nor does it extend to the articular surfaces, but it is in the neighborhood, and does not at all interfere with the functions of the joints, unless the pain be such that it hinders active or passive movements. Sometimes not only œdema, but local symptoms of dermatitis are found, as, for instance, prurigo and urticaria, not to speak of generalized perspiration, extending over the territory of the affected nerves. The attacks are sometimes very severe, and relapses are frequent.

Neuralgia of the trifacial is by no means rare. It is not so characteristically unilateral as in the adult. It is more frequently described—when the children are able to describe their pain—as existing all over the forehead, or on the top of the head. Children frequently inherit a disposition to this malady. Sometimes several children of the same family suffer from this disease. In many it is the result of anæmia, congenital chlorosis, hysterical predisposition or fully developed hysteria, of rhachitis, of scrofulosis, of masturbation. In all of these cases the attacks are very frequent, though they need not last long. In all, the general condition of the patients betrays the constitutional disorder. In some there is a general cause, though it need not be the result of either actual disease or congenital predisposition. The hard-worked school children nowadays, their long confinement in school-rooms and at home, the consecutive disorders of circulation, the insufficient oxygenation of the blood because of lack of exercise, the digestive disorders resulting from their sedentary life, are just as many causes of impoverishment of the blood and insufficient nutrition and stimulation of the nervous system. In all these cases headaches are very frequent. But local causes, as well as general, produce the same effect. The frequent occurrence of mitral incompetency gives rise to headaches for two reasons: *first*, by producing local hyperæmia of the cranium and cranial cavity; and *second*, by interfering with sanguification.

There are other local causes. The fact that nasal, naso-pharyngeal, and pharyngeal catarrh is very frequent is known to all. Enlargement of the tonsils is sometimes congenital, but very much more frequently acquired. Chronic enlargement gives rise to sub-acute and acute attacks of pharyngitis. The bad air of our large cities, the frequency of diphtheritic affections and of infectious diseases generally, also contributes to increase the pharyngitis; and the local irritation of the branches of the trifacial nerve extending over the mucous membrane mentioned, is a very frequent cause of both motory and sensitive affections within all the ramifications of the branches (of the trifacial nerve). An illustration of the motory affection is local chorea. We are in the habit of observing a great many cases of frowning, twitching, winking, shrugging of the shoulders, which may continue for years. Sometimes this local chorea extends over the entire body, but usually that is not the case. As a rule, it remains local and thus encourages the parents the more in their attempts at correction by admonition and punishment than at a cure. It is safe to say that no child will contract a local chorea of that kind as the result of bad habit; but that in all cases there was a local cause in the beginning. In almost every case there is chronic nasal, or naso-pharyngeal, or pharyngeal catarrh, and in most cases there is enlargement of the tonsils.

Such cases of local chorea will not get well without local treatment. Not only is the motory part of the trifacial territory affected by such a local chronic or subacute disorder, but the sensitive portion of the nerve also may be involved. Thus it is that many cases of trifacial neuralgia will not get well until this local cause is removed from the affected mucous membrane. The connection between these two affections is very common indeed. I remember a number of cases in which half-grown children and adults suffered from intense attacks of trifacial neuralgia, on one side or the other, while partaking of ice cream.

Another local cause for headaches is the presence of hypermetropia. Near-sightedness in children is easily dicovered, but hypermetropia is generally overlooked. Infants and very young children do not suffer from cephalalgia in consequence of this affection; but children six years old and older, who are expected to use their eyes for certain special purposes, will very frequently suffer from intense headache on that account. As the cause is evident the indications for treatment are clear.

In mentioning the connection between trifacial neuralgia and affection of the thoracic sympathetic ganglion, such as may depend upon the presence of pleuritis or pneumonia, I have only referred to the more or less idiopathic affection of the same organ which, in the adult, gives rise to frequent hemicrania. The two forms of hemicrania seen in the adult—the spastic and the paralytic—are not found to the same extent in the young patient. The latter is found rarely, the former frequently. In these cases the cephalalgia is apt to be unilateral. The pupils are usually large, and during the attack the temporal artery is hard. It has been said that the pain can be relieved by pressing upon the carotid artery of the opposite side. Most of these attacks last only a short time—from one to several hours. Sometimes they last longer, but in such cases the pain is not so intense. The attacks have a long duration when the affection of the sympathetic ganglion is combined with general anæmia, particularly with anæmia of the brain. It is more frequently found in girls than in boys, and this fact appears to depend upon the anatomical fact of the relative narrowness of the artery. It is frequently found in those who have suffered from anæmia from early infancy, and exhibit the symptoms of congenital chlorosis.

Headache, as is well known, is one of the many symptons of most diseases occurring within the cranial cavity of infants and children; and it is not easy always, when the headache is the only prominent symptom by which to diagnosticate between a local neuralgia and a neuralgic affection depending upon an intercranial ailment, to make a correct diagnosis.

We are apt to be led by the paleness, and by the frowning of little children, to the diagnosis of meningeal trouble. No matter whether there is any fever or not—for it is a common occurrence that for weeks before the outbreak of tubercular meningitis—there should be such headache without elevation of temperature. In many cases the diagnosis cannot possibly be made within a certain length of time; and as that is true, we have to be the more careful with regard to it. All the more is this necessary, because a number of the symptoms which we are accustomed to attribute to incipient tubercular meningitis may also be found in uncomplicated neuralgia dependent upon anæmia, or local causes. Thus, for instance, the pulse is slow and irregular in incipient meningitis, and it may be the same in anæmia and cephalalgia. I have known children who have for years exhibited a slow and occasionally irregular pulse, even when they appear to enjoy an average degree of health. It is true of both pale anæmic and neurotic children. There is another symptom which may be mentioned in this connection, viz., the vaso-motor marking, the so-called *tache meningique* of Trousseau, which he was inclined to consider as an absolutely safe diagnostic symptom of tubercular meningitis. This is not so, and in this connection I will say to what extent I have found this vaso-motor mark to have any diagnostic importance. It consists, as you know, in a blush following gentle friction of any part of the body. It need not follow immediately after the friction has been made. Sometimes it does not make its appearance until one or two minutes afterward, and then it will stand out distinct and circumscribed for from one to three minutes, and slowly disappear. When it makes its appearance in the course of tubercular meningitis—in a case in which the diagnosis is absolutely positive—it can be safely regarded as a fatal symptom. For it is then present as the result of imminent paralysis, and will soon be followed by a rapid increase of temperature and pulse. Thus, in tubercular meningitis it is a symptom which occurs towards the end of the disease rather than in the beginning. On the other hand, I have had occasion, in a number of instances, to see the same symptom whenever there was any irritation of the vaso-motor centre. Thus, in hyperæmia of the medulla oblongata, in that very epidemic disease which appears to be making rapid strides just now, and which has not prevailed epidemically for more than a dozen years—cerebrospinal meningitis.

In this disease, vaso-motor tache makes its appearance in a number of instances; at least I have seen it in the very beginning of the disease. In several cases I have been able, when the diagnosis between tubercular meningitis and cerebro-spinal meningitis was difficult, to rely on the early appearance of this *tache meninginique* as a positive symptom of cerebro-spinal meningitis, in contradistinction to tubercular meningitis. On the other hand, it is not these two diseases alone which show the same symptom. It has been noticed in pneumonia, in typhoid fever, and in those diseases which are apt to give rise, either to irritation or paralysis of the vaso-motor system. But more than that, a serious organic lesion is not a necessity to the appearance of this symptom. There are a number of cases of simple neuroses in which we meet with it. Hysterical persons, of either sex, may show it, even in relative health. A very excitable nervous man, whom I observed lately in Bellevue Hospital suffering from pneumonia, exhibited a general hyperæmia of his face, on both sides, during four or five days of his sickness; and while this hyperæmia was present, the tache could be produced upon any part of his body. This symptom, therefore, is by no means so exclusively characteristic as it was believed to be formerly. But when all the symptoms present are weighed, and the hysterical element and the general neurotic condition can be excluded in an individual case, it certainly is a very valuable symptom.

The headaches dependent on pachy-meningitis, or neoplasm in the cranial cavity, or alcoholism, or uræmia, or infectious diseases, must not engage our attention here, as I mean to deal with local neuralgia only. Some of the rarer forms of neuralgia, as observed in adults, have been noticed, now and then, amongst children, but they are scarce. Thus, for instance, the cervico-occipital pain, which may depend upon rheumatic affections, and be a symptom of spondylitis and retropharyngeal abscess, may be severe enough to result in vomiting, as do many other serious neuralgic affections. The cervico-brachial neuralgia also, which has been observed after traumatic injuries, and in consequence of large swellings of the axillary glands, has been found. Still further, but very rare indeed, the lumbar neuralgia has been noted. Sciatica, whether traumatic or rheumatic, does not occur at all frequently. Intercostal neuralgia, however, occurs more frequently, and I have already mentioned that it may be the result of constitutional disorders—of pleurisy, of rhachitis of the thorax, of spondylitis, of traumatic injuries. It is also now and then found, perhaps not so infrequently as we are apt to believe, in gastric disorders. In the same way in which abdominal neuralgia follows intrathoracic processes, it appears to be a fact that intercostal neuralgia may follow abdominal affections.

The prognosis of neuralgia in infancy and childhood depends, to a great extent, on the etiology of each individual case. Where it is the result of malaria the prognosis is very favorable. Where it is not the result of intracranial disturbances of a serious character, the prognosis, so far as life is concerned, is almost always good.

Where a local neuralgia, or general neurotic condition, is the result of chronic diseases or constitutional disorders, prognosis as to complete recovery is very doubtful; at all events recovery must be slow.

Therapeutics must be addressed to the causes.

Where there is a hereditary predisposition it is necessary, more than in any other cases, to attend carefully to the nursing and diet of the infant. A neurotic woman should not nurse. Good artificial food is preferable to the milk of a mother who is either hysterical or neuralgic. School-children who are overworked should be taken from school. Every one of us has to occasionally meet that indication. Many children do not bear the public schools at all. Where there is a peculiar neuralgic tendency children should be taught at home, or on their walks. They should have more exercise; should skate and swim. As a rule, neuralgic children are anæmic, and while there is no better invigorator than cold water, we must use our judgment in recommending it, by way of cold bathing or cold washes, in such cases. For such measures are useful only when the cutaneous circulation is such that, after employing cold water upon the surface of such infants, instantaneous reaction takes place. When that is not the case it should be avoided, and the skin and the general system should undergo preparatory treatment, either with dry friction or rubbing with tepid water and alcohol, alcohol and cold water afterwards, until the general invigoration is such that cold water and sea-bathing can be endured.

I have not observed that so-called specifics have done good in cases of neuralgia, with the exception—if they can be called specifics—of mercury in syphilis and quinine in malaria. Arsenic in moderate doses, given for a long time, will do best. Not only will it act as a nervinum, but also as a nutrient.

Bromide of potassium, in my experience, does more harm than good in these cases. It may act, when given in single doses, or two doses, in one attack, but to continue it for the purpose of reducing the general neurotic condition is a mistake. The same may be said, and perhaps to a greater extent, of narcotics, such as opium. They will not be tolerated for any length of time, though it may be necessary to use them occasionally. The oleate of morphia, in my hands, has done good service. Better than opium, in many cases, is chloroform or iodoform, despite the bad odor of the latter, used either in the form of an ointment or as iodoform collodion. Chloral hydrate will always be required to meet a momentary attack. Yellow jessamine has not acted well in my practice. Quinine, particularly the bromide of quinine, either combined with arsenic or administered alone, has proved beneficial, and the doses need not be large. When general malaria is suspected, or proven, the doses should be larger, and given at longer intervals. Kneading the affected territory and the general body has rendered good service. Galvanism, not to such an extent as in the neuralgia of adults, has been of occasional service; and, on the other hand, I have seen good results follow the use of the induced current.* Ergotine would be indicated only in cases of paralytic hemicrania. Inhalation of the nitrate of amyl—although my experience does not yet justify me in recommending its use extensively—in the usual cases of spastic cephalalgia has given occasional satisfactory results. Caffein, and guarana, have done better, and generally have been sufficient to cut the attack short within a little while. Otherwise the indications must meet causal requirements. In most cases we have to deal, if not with mitral incompetency, where digitalis does good, with general anæmia, and in such cases cod liver oil, iron, and strychnia will act beneficially.

DISCUSSION.

Dr. Gray observed that in regard to so elaborate a paper as that which Dr. Jacobi had done the Society the kindness to read, it was almost flippant to attempt to make any remarks about it in the way of an ordinary discussion. It covered so large a ground and took up so many questions of great interest, that he knew of no way of thoroughly going over the paper except by a long detailed conversation with Dr. Jacobi. But he would like to ask the Doctor one or two questions if he would permit him. In the first place, he spoke of the use of electricity in cases of neuralgia and of finding the induced current of value. Was this remark intended to apply to neuralgia of the trigeminus? In cases of trifacial neuralgia, was the galvanic or induced current found of distinct benefit, apart from other drugs? He would then like to ask Dr. Jacobi whether he had noticed any relation in children between a disordered condition of the stomach and trifacial neuralgia? Dr. Gray had not had the good fortune to see a large number of cases of neuralgia in children, but he had seen a certain number, and in those cases he thought he had observed a very frequent relation between neuralgia of the trigeminus and a disordered condition of the stomach. The majority of such cases in adults could be relieved by simple attention to the stomach, either in the way of medicine or diet. And he had found the same relation existing between neuralgias of other branches, and had explained it upon the natural supposition that the origin of the trigeminus and the origin of the pneumo-gastric were very close together; whereas, the origin of the pneumo-gastric was at some distance from the origin of the other nerves. This was a point so frequently observed by him that he had almost been in danger of making a hobby of it, and for that reason he would like to ask Dr. Jacobi's opinion. He was glad that Dr. Jacobi had spoken of the use of bromides. He thought that in a very large proportion of the cases where they were used they were used erroneously, and that it required a very considerable amount of skill to use them with benefit in any case of neuralgia or neurosis.

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* In articular neuralgia, not in trifacial.

Dr. Jacobi said that in reply to the last remark of the doctor's, he felt tempted to say that it did not require so much skill nowadays to use the bromide as it did to avoid using it. It was a frequent thing to be scolded for not using it. In families every mother knows everything, every nurse knows everything, about bromide, and sometimes a good deal more than everything, and when you do not use it, you are very apt to make the impression that you do not know half enough. It requires some skill to avoid it. As far as the Faradic current was concerned, in neuralgia, he must again refer to what he said before beginning to read his fragments, that he would have wished very much to be a little more explicit and go into specializing the indications for treatment. As far as trifacial neuralgia was concerned, he had not meant to speak of any beneficial effect of the Faradic current. The main success he had had with it was in cases of articular neuralgia, and sometimes in cases of intercostal neuralgia, but mostly in cases of arthralgia. As to the doctor's third question, in regard to trifacial neuralgia occurring with gastric disorders, it is very difficult to prove the presence of the latter in very young infants, but in children as old as four or five years it may be proven. In older children it is of very common occurrence.

Dr. said that Dr. Jacobi had stated that in his practice or experience stramonium had not been successful. He would like to ask whether Dr. Jacobi alluded to his experience with children, or whether he extended it to his entire experience, with adults as well, in neuralgic cases, and whether he had used it to any extent —had pushed it to its physiological effects.

Dr. Jacobi said that he spoke of his practice among children only. He believed he had seen better results in adults than in children.

Dr. remarked that it had been used sometimes as a *dernier resort*, and had succeeded in some cases. But he did not know what degree of confidence was to be placed in a sparse number of cases.

Dr. Jacobi said that he had mentioned this remedy because he had used it to a certain extent; but he did not know how much confidence he could place in it from what little he had seen of the effect. Very probably many of the gentlemen present had tried it repeatedly.

GRINDELIA ROBUSTA AS A REMEDY IN ASTHMA.

BY T. M. ROCHESTER, M.D.

The presentation of this subject to the profession has been delayed purposely for some time, and that for two reasons. In the first place, the writer is but a slight believer in the many much-vaunted *new remedies* with which we are at present deluged; and, secondly, he did not wish to be accused of making a great cry over the successful treatment of a few cases. Some months ago, the *Medical Record*, in giving a list of various new drugs, said that Grindelia Robusta had been before the profession for several years, and did probably, therefore, possess some useful properties, although, as there was no literature on the subject, a great deal of ignorance existed as to its real value. The silence of other observers is sufficient excuse, if one were needed, for the writer simply giving his individual experience with the drug.

It is the object of this paper merely to tell what has been done with, and noticed of the action of Grindelia Robusta.

On taking the Chair of Diseases of Heart and Lungs in one of the dispensaries here some two years and a half ago, I naturally met with quite a number of cases of asthma, and having for some months faithfully tried the various approved plans of treatment, which I had used with more or less—usually less—success in private practice, I determined, simply as an experiment, to see what could be done with Grindelia Robusta. It must be remembered that the majority of cases first treated were of long standing, and among a class of people whose hygienic surroundings were, as a rule, bad, and whose occupations, in some instances, were extremely obnoxious to the disease. Notwithstanding this, however, the result of the treatment was more than gratifying. The writer is not one who is much inclined to talk about *cures*, but in no single instance, and that, too, covering a comparatively large experience, has it failed to effect a prompt and decided relief. Up to the present date, including both private and dispensary practice, I have used it in over sixty cases, of which I have made note, and nearly as many more without any record. It has seemed to be of equal efficacy, whether employed for simple spasmodic or for inflammatory asthma. In two cases of cardiac asthma, when combined with the other remedies, it has relieved the dyspnœa as nothing else would. It is useful both during the paroxysm and in the intervals, although it is to be given differently in the two instances. For the former it should be administered in half drachm doses of the fluid extract every fifteen minutes, until the spasm is relieved. At other times it is to be given in fifteen to twenty drop doses, at intervals of from four to six hours, and continued for from a week to ten days, when, except in very obstinate cases, it will have accomplished what was intended, and the patient will experience relief for a period of six or eight months, and in many cases longer. At the approach of another attack the use of the drug for a few days will be found all that is necessary.

My usual dispensary formula for its administration is as follows:

R.

Potassii bromidi, ℥ss.
Fl. ext. Grindeliæ Robustæ, Syr. Ipecacuanha, of each, ℥i.
Aquæ puræ, ℥ii. M.
Sig. Teaspoonful every four hours.

This had better be varied in private practice, as it is decidedly nasty to the taste. In my experience I have rarely had to give more than one bottle of this mixture until after the expiration of the time mentioned above. Grindelia Robusta has also proved of singular benefit in hay asthma. In one case in particular of this nature, where the patient, a lady, had been a great sufferer from this affection for thirty-eight years, and had tried everything without any relief, it acted like a charm, and I received a note of thanks from her which would have made the fortune of a patent-medicine man.

I have used it now exclusively for all asthmatic affections, occurring in my practice, for over two years, and have never been disappointed in it. Others may not be so fortunate, as there is a great deal in getting used to any remedy and learning just how to vary its administration and dose for each individual case. The writer's experience, however, is excuse enough for his occupying a portion of your time this evening, and he believes that Grindelia Robusta will prove of very great assistance in a number of what might otherwise have been exceedingly obstinate cases. A number of my friends in the profession have used it and report good success. In one case, in the practice of Dr. McHaughton, where it was given to a child during a paroxysm, although it relieved the dyspnœa, it also seemed to have a decidedly depressant effect. This is the only instance where I have seen or heard of its having this action, and am inclined to think it due in this case to some idiosyncrasy of the patient.

As regards the preparation used, I have always employed the fluid extract, but think that, owing to its unpleasant taste, if there be a solid extract it would be preferable to give it than in pill form. The writer has never, to his knowledge, used the Western preparation of this drug, but finds, on inquiry among his apothecaries, that he has obtained that made by different New York manufacturing druggists.

In conclusion let me say a few words as to the probable action of Grindelia Robusta. I do *not* believe that it is a specific. My observation of its effects induces me to consider it primarily as an anti-spasmodic, with possibly especial reference to the spasm of the bronchioles. Secondly, it is a stimulant expectorant, and this is probably why, in conjunction with its anti-spasmodic properties, it is so peculiarly useful in inflammatory asthma. Thirdly, it may be regarded, in a certain sense, as a bronchial tonic. Judging from its action, it looks as though it might prove useful in pertussis, but my own experience with it in this affection has not been sufficient to warrant an assertion to that effect. I have used it in a few cases in dispensary practice, and the mothers have told me that the children's paroxysms were not so severe or frequent while taking it, but this is only hearsay evidence.

I have used it, however, with marked benefit, in a great many cases of bronchorrhœa and chronic bronchitis, as an adjuvant to other measures.

It was my intention to have brought up this subject at the time that the treatment of asthma was under discussion by the Society, but I was unable to be present at that meeting. The continued use of the drug since that time enables me to speak much more positively as to its efficacy than I could then have done. My experience then would not have warranted more than a suggestion as to its use. At present, however, I feel that I can thoroughly recommend it, as it has proved, in my hands at least, far superior to any of the other remedies or methods of treatment for asthma.

Wishing to make this a fair and impartial statement of the merits or demerits of Grindelia Robusta, so far as its use in any way has come to my knowledge, I will say that I learned yesterday from Dr. S. E. Fuller, since writing the above, that he has tried it in six cases with no apparent benefit except in one case. In this instance, however, the drug acted with marked and decided efficacy. I believe that the doctor has only used it during the paroxysm, which perhaps accounts for his lack of success, as it seems to be more especially useful when given during the intervals, for the purpose of warding off an attack.

DISCUSSION.

Dr. Squibb said he would like to ask the doctor whether in his usual use of the drug he had combined it as he mentioned in the prescription which he gave of bromide of potassium and ipecacuanha; whether that was his usual form of using it, or whether it might be understood that he had used it alone; and whether the prescription he had given was the exceptional or general form.

Dr. Rochester replied that he had usually used it alone, but the prescription mentioned had been a customary formula to write for a dispensary.

Dr. said that he had been in the habit of using the Grindelia Robusta for the last four years in all cases of asthma. Before that he had tried all the ordinary remedies that had been vaunted, and were often found useful, but the treatment with which had on the whole been unsatisfactory. He had been very glad to learn that grindelia was considered a specific. The first case where he had tried it was an exceedingly severe one—that of an elderly man, who was given to drink somewhat and had frequent attacks of asthma. When he saw him he was in a feeble condition, and he really did not think the man would recover from the severe attack he had at that time. The usual remedies were tried during the paroxysm, and after he had got a little better the doctor put him on the robusta, pure, and kept him on it for some time, and he recovered in a way that was very satisfactory. He had had no attack since, although he had been threatened with it two or three times. Formerly he had been subject to the attacks from the very slightest causes. During the last four years, on several occasions, the man had called on him, and he had put him on the old drug, and to be sure that whatever benefit there was was derived from that, he had never mixed it with anything but glycerine. In this case it certainly worked wonderfully well, and it had encouraged him to try it in other cases; and since then he had used nothing else, and it had given uniform satisfaction. As to Grindelia Robusta, he had nothing to say. It was strongly recommended by some of the early writers. He thought it would be a good thing for members to try it, who had not given it a trial. It was certainly a safe remedy.

Dr. Squibb remarked that it was about the year 1867 when Dr. Gibbons' first paper appeared in which this grindelia was noticed. There have been so many statements made in regard to it that have partaken of the character of advertisements, and so much has been said for it, as to create suspicion in his mind that the observations had not been very accurately made. In the first place—in this market, at least (and he presumed in others, for this market has been supplied from California mainly)—there have been three different varieties of it very common; and they seem to have been used without discrimination. Grindelia Squarrosa has been as often seen in this market as Grindelia Robusta—perhaps not of late—but certainly in the early history of the drug, it was as common to see the squarrosa as the robusta, whilst to the two were attributed very different effects. He might say that there is therefore some reason for supposing that the fluid extracts, as made in this market, are as often made of one variety as of the other.

Then another thing appeared to him to be suspicious, and that was, that it relieved such various kinds of asthma—that asthma from very different and almost opposite conditions, all seemed to be relieved by it. It is very easy indeed to expect too much from a remedy of this kind, and when one sees the florid statements made about it, the suspicion very naturally arises that beneficial effects may be ascribed to it in some cases which may have been relieved by combinations which were given with it. He was not aware that there had yet been published a single series of observations, or even single observations, where the drug had been critically and accurately observed in its application. He would like to ask Dr. Jacobi whether he knew of any investigation that had been made of the drug in regard to its application to even spasmodic asthma.

Dr. Jacobi replied that he knew of none, which was all he would say about it. But he thought he should begin on the very next day to use the drug.

THE MEDICAL SOCIETY OF THE COUNTY OF KINGS.

The regular meeting of the Medical Society of the County of Kings was held at Everett Hall on Tuesday evening, the 19th inst., Dr. Charles Jewett in the chair, Dr. Wyckoff, Secretary.

The President called the meeting to order at 8:20.

There were about 70 members present.

The Minutes of the last meeting having already been printed in the Proceedings of the Society, their reading was dispensed with.

There were no proposals for membership.

The President introduced Dr. A. Jacobi, President of the Medical Society of the State of New York.

Dr. Jacobi said: Allow me to express my thanks for your kind invitation to be present here this evening. In accepting this invitation, I do so the more undeservedly, knowing it to be an honor conferred upon me personally as well as upon the State Medical Society, whose first officer I have the honor of being this year. Your County Medical Society has always known how to honor the State Medical Society, which is well shown by the character of the men whom you are in the habit of sending to Albany every February. But again I thank you for the honor as far as it concerns me.

In regard to the title of the paper which I was to read here this evening, I also beg pardon for saying a few words. I have hardly had time to confine to writing what I should have liked, in order to do justice to the subject and to the Society. As it is, I beg you to accept the few fragments which I am going to read simply as a subject for dicussion, and perhaps no more.

Dr. Jacobi then read a paper on Neuralgia in Infancy and Childhood, which was discussed by Drs. Grey and ———.

A paper on Grindelia Robusta was read by Dr. Rochester, and discussed by Drs. Squibb and ———.

Dr. Hutchins said that on this general topic he desired to make a statement. The Society would probably recollect that at the last meeting, or the meeting before the last, upon the recommendation of the President and Council, a number of new Standing Committees were added to the Society. One of that number was a Committee on Therapeutics. That Committee had had a meeting, at which, however, it had found a great deal of difficulty in estimating its importance or its functions. It practically knew not what to do. It had had no instructions from the Society, and they were unable to settle in their own minds as to its particular relations to the Society, or what it could do for the Society usefully. In general, it appeared to be the sentiment of the members of the Committee, that it could be made useful to the Society by acting upon the Society's special instructions under any circumstances which might arise. And in order that it might show its willingness and good intentions to be of use to the Society, it would take advantage of the present paper of Dr. Rochester, on Grindelia Robusta, and at the instance of the Committee, Dr. Hutchins would make the request that the Society refer this subject of the usefulness of Grindelia Robusta to the Committee for thorough investigation and report.

A motion, in accordance with Dr. Hutchins' request, "that the matter be referred to the Committee for report at some future time," was unanimously carried.

Dr. Stuart stated that he would like to call the attention of the Society to the notice to appear in the forthcoming number of the Proceedings, of the Committee on Obstetrics, and the plan that they offered for bringing before the Society at its June meeting, the subject of Puerperal Hæmorrhage, and to request that the members of the Society would feel individually asked and urged by the Committee to prepare papers upon the subject which should embody their experience or their ideas upon either of the points presented in the programme.

Dr. George R. Fowler was appointed by the Chair a delegate to the Medical Society of the County of Queens.

The Chair announced the following gentlemen elected to membership: F. R. Newman, M.D.; C. Eugene Gunther, M.D.; Melville W. Barnhart, M.D.

The Chair said that he was sure the Society would unite with him in returning their thanks to Dr. Jacobi for the honor he had conferred by his presence, and also for his extremely interesting and valuable paper.

On motion, adjourned.

'Ασκληπιὸς ὁ Σωτὴρ

Χαρμα μέγ' ανθρωποισι, κακων θελκτῆρ' οδυναων.

Hymns of Homer, No. XVI.

PROLIFERATIONS.

——The Paper on Grindelia Robusta in Asthma, published in this issue, has been referred to the Committee on Therapeutics for investigation and report.

——The International Medical Congress convenes in London August 2. The circular of the State Medicine Section has been received, through the courtesy of Prof. Corfield, one of its Secretaries. Mr. Simon is its President, and Dr. George Buchanan is one of the Vice Presidents.

——Medical Legislation in the State of New York is in part the subject matter of a paper by Oliver E. Lyman. It is appropriate to these times, when it is seriously proposed to repress quackery. The writer states that for thirty years quackery has overmatched true medicine in all legislative dealings. He thinks that in the acts of 1874 and 1880 much has been accomplished, and that "the profession is in a fair way to be purged of most that is foul in it." Why not? The quacks are in a minority as to numbers, influence and respectability; although they may be more ready to use improperly their ill-gotten shekels.

——The Medical Register, published by the N. Y. Medico-Historical Society, and otherwise commonly known as the "Green Book," is now being made up for the year 1881–82. The editor, Dr. White, 130 East 30th Street, requests that *this year* all Brooklyn medicos will fill out the circular he has sent them promptly and fully. So doing, they will lighten his labors and assist in the early appearance of the book. If any physician finds need for any correction or change in the entry of his name, or any change in the *personnel* of the public institutions with which he may be connected, the present is the time to attend to such matters.

To the Publishing Committee :

In discussing Dr. Rushmore's paper on the *Removal of Foreign Bodies from the Cornea* (April Proceedings, p. 47), I am reported as follows : "Patients, in some cases, have to pass a night with the foreign body in the eye before it is removed. He recollected such a case—that of a boy at the hospital. But such cases did not often occur." I am unable to say what was the cause of this remarkable statement, but I had no intention of being guilty of any such platitude. A second point to which I take exception is contained in the following words : "A question suggested by a recent experience of his was how to recognize the total absence of the cornea—an experience that Dr. Rushmore had also had. He had treated a case of conjunctivitis at the Eye and Ear Hospital for four months, when he had recognized the fact that there was absolutely no cornea left" ! ! ! There was *nothing* said that warranted the last sentence. A little ambiguity was intended. In Dr. R.'s case a patient was brought to the hospital after the cornea had sloughed and the loss had not been recognized by the bringer, and the assertion was afterwards made that the eyesight was better on going to the Hospital than afterwards ! This was true, but not as meant or understood by the complainant. A child was brought to me at the hospital with total loss of the cornea of one eye. I at first understood that it had been treated by the physician who sent it, which I now believe was an error. A distinguished member of the profession once called my attention to a man in a similar condition, which certainly had not been previously recognized. I wished, in a quiet way, to intimate that such things can happen even in Kings County. I have now under treatment a patient whose cornea has melted away under my care, but the destruction was recognized, though I could not control it.

J. S. Prout.

——The Committee on Obstetrics.—Notice is here given that at the June meeting of the Society the subject of "Puerperal Hæmorrhage" will be discussed, under the following heads:

1. Hæmorrhage Before Labor; Placenta Previa and Its Treatment.

2. Hæmorrhage During Labor; Partially Detached Placenta, Rupture of the Uterus, etc. Treatment of each.

3. Hæmorrhage After Labor: Post-partum Hæmorrhage, Treatment; Secondary Hæmorrhage, Treatment.

The discussion will be opened in brief papers by members of the Committee on Obstetrics on each topic. Dr. Wallace considering the first, Dr. Clark the second and Dr. Vanderveer the third topic. It is the design of the Committee that members of the Society should prepare brief papers or extemporaneously discuss one or more of the points—no one occupying more than ten minutes.

The Committee also request members who will take part in the discussion to forward their names and the points they will discuss to the President of the Society in time to have the programme of the meeting made out.

Francis H. Stuart, *Chairman.*

——The Regular Monthly Meetings of the Medical Society of the County of Kings are held at 8 P. M. on the third Tuesday of each month, at Everett Hall, 398 Fulton Street.

The May meeting will be held on the 17th. The following papers will be presented:

"Hemorrhage During Tracheotomy," by Dr. G. K. Fowler.

"Remarks on the Care of Eyes of New-born Infants," by Dr. J. S. Prout.

"Points of Interest in Medico-Legal Trials," by Dr. J. Walker.

"Diseases of Shop-girls—Notes from Private Practice," by Dr. D. E. Chace.

MEDICAL SOCIETY OF THE COUNTY OF KINGS.

OFFICERS AND COMMITTEES FOR 1881.

President	C. Jewett, M.D., 307 Gates Ave.
Vice-President	F. W. Rockwell, M.D., 6 Lafayette Ave
Secretary	R. M. Wyckoff, M.D., 532 Clinton Ave.
Assistant-Secretary	J. H. Hunt, M.D., 419 Hart St.
Treasurer	J. R. Vanderveer, M.D., 301 Carlton Ave
Librarian	T. R. French, M.D., 469 Clinton Ave.

CENSORS.

B. A. Segur, M.D., 281 Henry St.
A. Hutchins, M.D., 796 De Kalb Ave.
B. F. Westbrook, M.D., 174 Clinton St.
W. H. Thayer, M.D., 171 Livingston St.
J. D. Rushmore, M.D., 129 Montague St.

DELEGATES TO THE MEDICAL SOCIETY OF THE STATE OF NEW YORK.

(1878 to 1882.)

Drs. J. C. Shaw,
J. D. Rushmore,
C. Jewett,
A. Otterson,
Drs. G. G. Hopkins,
J. S. Wight,
A. Sherwell,
W. Wallace,
Drs. J. Byrne,
B. F. Westbrook,
E. N. Chapman,
F. W. Rockwell.

Chap. XI., Art. 2, of By-laws: "Any Member elected as Delegate to the Medical Society of the State of New York, who shall be unable to act as Delegate during two successive years, shall be considered to have vacated his position as Delegate."

DELEGATES TO THE AMERICAN MEDICAL ASSOCIATION,

To be held in Richmond, Va., May 3, 4, 5 and 6.

Drs. Andrews,
Armor,
G. W. Baker,
Bartlett,
Burge,
Byrne,
A. S. Clarke,
Crane,
Corbally,
Evans,
Drs. Fowler,
Griffiths,
Hutchins,
Hutchison,
L. S. Pilcher,
Prout,
Raymond,
Read,
Rockwell,
Rushmore,
Russell,
Drs. Segur,
Shaw,
Sherwell,
Skene,
Squibb,
Vanderveer,
Walker,
B. F. Westbrook,
H. F. Williams,
Wyckoff.

COMMITTEES OF THE SOCIETY.

HYGIENE.

Drs. B. F. Westbrook,
B. Edson,
N. B. Sizer.

REGISTRATION.

Drs. W. E. Griffiths,
A. S. Clarke,
J. A. Jenkins,
Drs. W. G. Russell,
N. Matson,
F. W. Rockwell,
Dr. C. H. Potter.

PHYSICIANS' MUTUAL AID ASSOCIATION.

Drs. B. A. Segur,
G. W. Wells,
W. W. Reese,
G. W. Baker,
N. W. Leighton,
A. Hutchins,
C. A. H. Szigethy.

PROCEEDINGS

OF THE

MEDICAL SOCIETY OF THE COUNTY OF KINGS.

Vol. VI. JUNE, 1881. No. 4.

THE CARE OF THE EYES OF NEW-BORN INFANTS.

BY J. S. PROUT, M.D.

During fœtal life iritis is believed to have occurred, and it is also observed in the newly-born. (Stellwag.) While the head is passing through the vagina the eyes are in danger from causes external to them, and when the child has been born there are other agencies at work that may produce serious disease.

Intra-uterine disease of the eyes of course cannot be recognized or suspected even, but the iritis existing at birth or its results may be seen and treated. The diagnosis is the more difficult, as the child gives no evidence of pain or want of seeing power. Only careful inspection can determine it. The purpose of the pupil is to act the part of a diaphragm to regulate the amount of light admitted into the eye; to accomplish this purpose its margin must move freely over the anterior surface of the crystalline lens with which it is in contact. When inflamed, the iris, like a serous membrane, throws out plastic material by means of which its posterior surface becomes adherent to the anterior capsule of the lens, thus at once arresting its freedom of movement. The same material may be also thrown out so as to occupy the pupillary space. "The ordinary accompaniments of such attacks of iritis, syphilitic eruptions, apthæ, condylomata about the anus, etc., enable us to recognize the existence of syphilis without difficulty. Such children generally have mothers who had acquired syphilis at a time not far removed from the period of parturition. Well-nourished children are said to be more disposed to it than the opposite class." (Hutchinson, quoted by Stellwag.) It is not necessary further to discuss this aspect of the subject.

In the process of parturition the eyes are in danger from two sources: inoculation by vaginal discharge, whether gonorrheal or simply leuchorrhœal, and mechanical injury at the hands of the attendants. The writer only recalls one case of the latter sort, and that, a slight one, was in the practice of one of our ablest members. This needs no further comment. The danger from inoculation is, however, vastly greater, for the proportion of parturient women with vaginal discharge is large. In the lying-in hospital in Stockholm, in 1832, of 328 mothers, 137 (41 per cent.) had vaginal blennorrhea, and 181 (59 per cent.) had not. Thirty cases of ophthalmia neonatorum occurred, of which twenty, or two-thirds, were the children of mothers with vaginal discharge, and ten, or one-third, of mothers without vaginal discharge. (Mackenzie, quoted in Graefe-Saemisch Handbuch, IV. 1. 90.) The danger thus incurred is always serious, and sometimes the greatest to which the human eye is ever exposed.

All writers lay the greatest stress as to causation of infantile conjunctivitis on this exposure during parturition; next in order rank direct communication by the mother's or nurse's hands, and indirect by atmospheric dissemination of disease-germs; then, less active and less dangerous, are enumerated as causes: bad atmospheric surroundings, exposure to too great light, cold air, soap in the first washing, smoke, dust, irritating gases, etc., etc.

From this brief review it is apparent that the care of the new-born infant's eyes should be, in the first place, prophylactic, commencing before its birth, by curing any vaginal discharge that may exist, or, if this cannot be done, by rendering the discharge innocuous. Prof. Horner, of Zurich, says that, so far as he knows, Bischoff, of Basel, was the first to undertake systematic washing out of the vagina with solution of carbolic acid, and of the infant's eyes with salicylic acid in solution. It appears from a communication made by Bischoff that the proportion of cases of ophthalmia neonatorum in the Basel lying-in hospital, from 1868 to 1873, was 5.6 per cent. After 1873 improved conditions of attendance and cleanliness were obtained, and in 1875 the systematic use of vaginal injections of solution of carbolic acid was begun. In the years 1873–6 inclusive, in which there was a threefold increase of births, the conjunctival blennorrheas were reduced to 3 per cent, or, to be more exact, in 1873 and '74, under simply greater care and cleanliness, to 3½ per cent., while in 1875 and '76, in which the vaginal injections were also used, only 2.6 per cent. were affected. Die Krankh. des Auges im Kindesalter, Horner, in Gerhardt's Handbuch der Kinderkrankheiten. Bd. V. Abt. 2, p. 263.

So much can be done in anticipation of the birth. After birth the child's eyes must be very carefully cleansed. Bischoff, as above quoted, uses a solution of salicylic acid for this purpose, but Horner thinks this too irritating, and advises instead a solution of boracic acid. When the vaginal discharge is virulent he (H.) says the child should not be kept in the same room with its mother. The first washing that the infant receives is a serious affair, and the little one is fortunate if, in default of more poisonous material, its eyes are not filled with soap, an irritant of no mean power, to which, perhaps, many of the milder cases of conjunctivitis are to be ascribed. These mild cases, too mild to come to the specialist, I am told are very common, and when we consider how very great is the change from the intra to the extra-uterine life of the child, this is by no means to be wondered at.

If the prophylaxis fails, "the disease sets in in from 12 to about 48 hours after inoculation; in infants the third day after birth is almost invariably given as the date when discharge was first noticed. Itchiness and slight redness of conjunctiva soon pass on to intense congestion with chemosis of conjunctiva, tense inflammatory swelling of the lids, great pain, and discharge. The discharge at first is serous, or like turbid whey, but soon becomes more profuse and uniformly creamy (purulent), and yellow, or even slightly greenish." (Nettleship, Dis. of the Eye, Phila., 1880, p. 67.) The disease may not commence so early, but the eyes should be carefully and frequently examined during the first ten days of the infant's life. Unless the disease results from direct inoculation, it is safe to assume that the later its appearance the milder will be its course —the less purulent and the more simply catarrhal.

As to treatment, the general statement may be made that until the discharge is distinctly purulent, the more simple, non-irritating it is, the better. Cleanliness is of the first importance—more valuable than all else. The discharge in severe cases is excessively irritating; its very frequent removal is therefore an urgent indication. For this purpose a solution of boracic acid (60 grains to a pint) may be used, at first every half hour or oftener day and night, but violence should be avoided in doing this. The pus should be, as far as possible, removed, and the solution should come in contact with it and with the inflamed conjunctiva. Vaseline, cold cream or lard should be used to prevent drying of the lids and consequent sticking together of their edges. After the discharge becomes purulent the same solution should be continued, but, in addition, a *mild* solution of nitrate of silver may be used. The general practitioner would do well to use this not stronger than one per cent., and half this strength will, in a large proportion of cases, be strong enough. The weak solution may be safely used twice or three times a day, according to the quantity of the discharge. When these solutions do not control the disease, it would be wise for the general practitioner to put the responsibility for its further treatment on some one else.

One eye only may be inoculated, and the disease may be carried from this to the other. It is recommended, therefore, whenever one only is affected, to try to protect the other by hermetically covering it. Various plans for this have been adopted. Buller's shield, "which consists of a piece of mackintosh about 4½ inches square, with a watch glass fastened into a hole in the centre, through which the patient can see," may be "fixed by broad pieces of strapping to the nose, forehead and cheek, its lower outer angle being left open for ventilation; particular attention is to be paid to the fastening on the nose." (Nettleship.) Instead of this, a piece of lint may be fastened over the eye by means of collodion, its outer surface having been made impervious to fluids by a coating of collodion.

It should of course be strongly impressed upon the mind that the danger to the cornea is great in severe cases of ophthalmia neonatorum—that, in fact, this is THE danger, for in time the conjunctivitis will subside spontaneously. When cloudiness or ulceration of the cornea appears, atropine solution is indicated. If the discharge is free, the use of the nitrate of silver must be persisted in. Cases are occasionally met in which no treatment seems to be of any avail, and this writer would have no confidence in the *experience* of the man who has never lost a case—his opportunities have been small; he has seen too few cases. Saemisch says the most dangerous cases, other things being equal, are those in which corneal changes occur early, but still those which appear later may, in spite of suitable and timely treatment, lead to destruction of the eye. (Graefe-Saemisch Handbuch, IV., 1, 91.)

As to the general management, it seems well that the young eyes should be kept during their first week in a half-dark room, and gradually be made accustomed to the light. Fresh air should be freely admitted, but should not blow directly on the child, which should be sent out of doors as early and as regularly as possible.

Trustworthy books on the diseases of the eye are now so readily accessible that it does not seem worth while to occupy your time by a longer discussion of this subject. Nor would it add to the practical value of this paper to make numerous citations from authors. General principles cover all the points involved, and to these principles it is only necessary to ask your attention.

DISCUSSION.

Dr. Walker said that there was one point perhaps that Dr. Prout had not touched upon, which every one knew the importance of insisting upon with parents, and that was, that great care should be taken in the use of the appliances for making the applications to the eye. The average parent he did not think knew how to use them properly. Many of them employed pieces of cloth, and not infrequently, parents were so careless as to allow these pieces of cloth to get into the hands of other children, and so contamination was spread. It had been recommended to use pieces of sponge, to be thrown away immediately after using. He thought it was well, in institutions, to provide not only pieces of sponge or something of that kind that could be thrown away after using, but he had been in the habit sometimes of using clam shells for holding the applications, especially at Coney Island, and had found them very serviceable. They can be thrown away, and there is no possibility of their being used again. He had known a saucer to be used repeatedly for the purpose of holding these applications, and the cloth put into the saucer after using, and afterwards used again, causing contamination in that way.

Dr. Burge observed that he preferred the camel's-hair brush to any other means of application. The hairs pass so easily between the lid and the lashes that it seemed to him the best means of washing. He had no special experience to refer to. The only case fatal to vision of the trouble that he recollected was in his very early practice. It was not a case of his own, but in the practice of Dr. Swett, of New York. He had seen it in the intervals between the Doctor's visits, and also with him. In that case both eyes were lost within the first week of life.

Dr. Schwarzenberg said that the cases that had come to his notice were all neglected cases in which there had not been proper treatment in the first place. Ignorant advisers were in the habit of giving ridiculous advice to mothers on this subject. For instance, he had a case where the mother was told that she might put some breast-milk into the eyes of the babe; and he had known other similar cases. He had not had so large an experience with the disease as some of the other gentlemen seemed to have had, but he thought that ignorance and negligence of the attendants during the first days was the cause of the bad results. After the disease had been established the best of treatmeat would not effect much.

Dr. Stuart said that he would like to ask Dr. Prout in regard to the use of the nitrate of silver. He did not remember from whom he had received the suggestion on which he had based his practice in the use of the nitrate of silver. While attached to St. Mary's Hospital he had fallen into the practice to use a solution of nitrate of silver and then neutralize the excess of it with a solution of chloride of sodium. He had followed that practice without thinking whether it was an essential part of the use of the nitrate of silver or not; but that had been his uniform practice, and the results had been very satisfactory.

Dr. Mathewson said it always seemed to him of importance that care should be taken to remove the coagula caused by the nitrate of silver. They act as foreign bodies if they are left in the eye, and cause irritation. Also, that the discharge should be cleaned away without touching the cornea itself, if possible. He thought that in cases that came from gonorrheal affections the discharge was more biting, more caustic, than that from leucorrhœa.

Dr. Squibb observed that Dr. Prout mentioned 60 grains of boracic acid to the pint of water, which was less than one per cent. He had rarely known less than two per cent. to be used, and the general recommendation was about ten grains to the ounce. He knew nothing about it from experience, but merely raised the question from having read about the acid.

Dr. Colton said that in the presence of specialists he hesitated to make any suggestions on the treatment of the eye, but in regard to the kind of instrument or method of washing the eye, he had been in the habit, in his small experience in that direction, of using a little drop pipette, using it with water or whatever solution was employed for washing the eye, throwing a small, gentle stream into the eye. It was quite impossible to exert force enough to impinge upon the eye too strongly, but the force is sufficient to wash out all that it was desired to wash out. This could be easily cleansed, being of glass, and it seemed to him altogether the most desirable means of washing out the eye.

Dr. Edson said that he had not heard any mention made of the use of bi-chloride of mercury in ophthalmia. Dr. J. Lewis Smith, if he did not mistake, recommended the bi-chloride, in weak solution. He believed his (Dr. S.'s) language was that he did not care to use anything else in place of it; that it had always given him satisfaction. He, Dr. E., had used it, and supposed he was doing right. But as it had not been mentioned in Dr. Prout's paper, perhaps there was some serious objection to it that he had not heard.

Dr. Prout stated that the neutralizing use of the common salt solution is to be highly commended. It would be found a good way back in the books—he could not say just how far—to be laid down as important that the cornea should not be touched by the nitrate in substance or in solution, or to the least possible degree. As to the point that Dr. Burge made, camel's-hair pencils are very good when used clean, but the pus lodges in the hairs, and it is impossible to get it out. Therefore, even when each patient has his own brush, it is not clean after the first using. He thinks it altogether safer to use a little mop of absorbent cotton, which can be made extemporaneously of any desired size, by twisting some of the cotton on the end of a probe, hair-pin or small piece of wood, the end having been roughened so as to hold the cotton more securely. Such a mop will hold the solution quite as well as a hair pencil, and carry it into contact with the reflected portions of the conjunctiva much better. The same method can be used for the ear, nose and throat.

The carelessness with which solutions of nitrate of silver are sometimes used is rather surprising, to say nothing of the danger involved. He had used, and had seen others use, the same brush for a number of successive cases of conjunctivitis. True, between each case, it was washed in fresh water, but at the same time there was a chance of the disease being carried from one to the other. It is proper, therefore, to use these cotton mops in all cases, and thus entirely prevent the possibility of infection. As regards the use of the bi-chloride of mercury, it is only necessary to say that Mackenzie recommends it very highly. In writing his paper he had intended to be suggestive rather than to exhaust the subject, hoping that discussion would bring up the neglected points.

DISEASES OF SHOP-GIRLS IN NOTES OF PRIVATE PRACTICE.

BY D. E. CHACE, M.D.

Efforts of late years have been directed toward the study of "class" diseases by physicians, co-equal with the attempt at "class" legislation by politicians, and the discussion of certain phases of society by philanthropists. Inquiries conducted on the plan of interviews by parties delegated for that purpose must necessarily result in failure. The want of confidence in a stranger, though bearing proper credentials, the natural timidity or fear of loss of position by relation of the truth, and the decided disinclination to confide the story of sufferings, obviously delicate subjects for conversation, are the very plausible reasons for the futile labors of those hitherto reported upon this investigation.

The fact that there have been, by reason of location of residence, under the professional care of the writer during the past two (2) years some one hundred and fifty (150) of those known as working-women, and because his records are to a certain limit confirmatory, and to a great extent opposite to the popular belief concerning the ills of women who are thus employed, the following statement is proffered.

The data in these cases were not collated during this period for this specific purpose, but the facts were compiled from memoranda of cases under treatment. The results given, while not as extended as could be desired, are presented as an inducement to obtain from other physicians brought in daily contact with a like clientelle, their observations, and by condensation of all, an epitome of particular maladies and their causation may be, in the future, pretty accurately gained.

The stir made in the medical and daily press describing the burdens of the shop-girl, the ill-effects of her continued standing during so many hours, has as yet not bettered the girl's condition or forced her employer to relax his rules. It may be well to remark in this connection that a bill to compel employers of women to provide seats for employees, to be used during the intervals of waiting upon customers, has already passed one if not both houses of the State Legislature of New York. That girls of whom we speak should feel the natural weariness accompanying prolonged standing is not denied, but that the health of these girls is seriously impaired by the enforcement of this regulation, rather than produced by other and more potent reasons, is not believed.

When *facts* are produced—and they can be if there be so much force in their arguments by those who shall properly present them—it will be time enough to allow our sympathies to run riot over one alleged cause; but this, we trust, will not prevent our looking beyond, and attempt to descry and publish to the world sufferings more poignant, and, unfortunately, more generally diffused. It is not within the province of the physician to remove the evils of which we speak, though these are factors in the social problem—in fine, the foundation of his patient's ills. His charity may and often does extend to the relief of their physical ailments, but his purse is not deep enough to supply food, raiment, and, more than all, suitable habitation.

Daily repetition of theories, though they be founded on false premises, become so familiar, so obscure our mental vision, that we cannot see but through the glass colored by error. More than this, we resent the advances and decline the testimony of the iconoclast who would fain destroy our idols and raze our temples with the artillery of stubborn facts. Preconceived opinions, therefore, together with those finer feelings of compassion born of our sympathetic natures, are to be laid aside for the while, and a cool, deliberate judgment given as the result of this inquisition.

The term shop-girl is used in this paper to signify that class of women between the ages of fifteen and thirty years, who daily labor at some mechanical occupation or engage in the capacity of clerks in dry goods houses, confectionery stores, etc. It has been deemed best to make this term shop-girl the generic one, and if any be annoyed at the title and claim that of saleslady, such person must be considered beyond the pale of our scrutiny. All of these people are employed from between seven and eight in the morning until from five to seven o'clock in the evening, with frequent additional hours, more particularly at the holiday and other busy seasons.

A period of vacation is afforded many in summer; others do not find work continuous throughout the year, and the larger portion enjoy half a day weekly, wages being deducted in most instances, during the warm season.

The list of those we describe is composed of, or rather we shall subdivide it into three sets as the most natural division, and because each set has its distinctive phase.

1st. The young lady who is reduced to poverty from affluence, and is necessitated to labor to live.

2d. Girls whose parents belong to what is termed the "middle" class in a country where caste is not supposed to exist, but where the boundaries of social status seem defined with rather prominent and very significant exactness to those who would cross their borders.

These young women labor to be independent of parental limitations of pocket money, or from a love of dress, inconsistent and incompatible with their means and station in life.

3d. The poor girl whom want, not of herself alone, but of all at home, forces to earning a weekly stipend, and whose entire wages are contributed to the general fund for the benefit of the household.

Representatives of these three classes above enumerated may be found side by side in almost any large establishment, working eight, ten, and twelve hours daily, especially since it has become the fashion—as it is found to be more economical—to employ women in the places of youth and young men. The specious plea of the employer, admittedly of some weight, that when women voluntarily subject themselves to perform the same work, and remain the same number of hours in active employment that men do, that they must waive all special rights supposed to accrue to them from difference in sex, is not deemed a proper theme to enlarge upon just here, though germane to the subject matter.

Moreover, it is perhaps offset by the argument that if women can execute as much labor, and are of equal value to the employer, they should exact and receive equal compensation for their toil.

To exhibit the question in as concise a form as may be, the subjoined tables indicate the diseases, their number and class, those peculiar to womenkind according to the divisions we have thought proper to adopt above:

TABLE A.

Phthisis Pulmonaris	10	Skin Affections	3
Syphilis	1	Measles	5
Heart Disease	5	Prolapsus Uteri	4
Amenorrhœa	40	Erysipelas	5
Spinal Affection	2	Ascites	2
Gastritis	5	Dyspepsia	3
Dysmenorrhea	22	Diphtheria	5
Anæmia	20	Scarlatina	5
Tonsilitis	5		
Bronchitis	5	Total	150
Pneumonia	3		

TABLE B.

	1	2	3	Total.
Anæmia	15	3	2	20
Amenorrhœa	20	5	15	40
Dysmenorrhea	8	2	12	22
Total	43	10	29	82

Of the four cases marked uterine displacement it is well to note that these were found in widows, and are to be considered among those of the first class. In each and every instance these were traceable to the parties being required to lift oppressive weights, such as large trays and boxes containing candy, or the replacing of heavy packages of cloth and muslin upon shelves.

An examination of the preceding table will indicate that seventy-two of the eighty-two cases enumerated in Table "B" are comprised in the first and third classes. Of the other affections, it is to be said that eight of the ten consumptives had hereditary phthisis. Three of the five cases of heart disease were preceded by rheumatic fever at an earlier period of life.

The zymotic diseases were most all aggravated in character, particularly those of measles, the severity of the symptoms being increased by marked and prolonged bronchial trouble. The dropsical patients previously suffered from scarlatina.

DEDUCTIONS.

Mindful of the distinctions declared at the commencement of these remarks, and with the tables before us, let us examine and strive to deduce logical inferences. The direct relationship between mind and health, the influence which an intellect unburdened with care exercises over disease is apparent to the physician.

When mental unrest, the outgrowth of despair, is continual, how can we hope for health of body? Anxieties come to all, but to the woman earning her meagre pittance, with the uncertainty of continual bread-giving occupation, with a place to return to from work, which it would be a mockery to call a home, with the thoughts of the happy past and the dreams of the future, how can she be well?

That she is pale from bad air and impoverished blood; that she is weary from her daily walk and still harder employment; that she is weak from lack of suitable, nourishing food; that she is nervous and irritable from loss of sleep and despondency is not wonderful; but that, in spite of all this, which has been known to drive men to suicide, how she lives is a mystery! Without a ray of hope, with not a single prospect of advancement, with no opportunities for improving her social surroundings, she either plods along the beaten path, and, according to her previous habits, remains stolidly indifferent to her fate since she knows no better; or, if she be of the class recognized as reduced gentlewomen, dies of what is politely termed, in the phraseology of the death certificates, consumption, but in reality death comes from a broken spirit and of starvation! It suffices to relate that two deaths from want of food in quantities sufficient to sustain life occurred in this city during the two years last past. When succor came it was too late, and the digestive organs refused to appropriate that which they had been so long denied.

The wages range from three to eleven dollars per week, the average about six dollars, and this amount is reduced to five dollars, when vacation, half days' pay, and absence and tardiness lessen, as invariably happens, this comparatively small remuneration.

This enormous sum with which to cancel board and washing bills, purchase clothing, pay ferriage, car fare, does not, with the most careful expenditure, leave an extraordinary surplus to lay by in case of sickness or loss of situation.

Looking from this amount of weekly wages—five dollars—received, we naturally direct our eyes toward the dwellings of these people. With the cash capital we find in the possession of our patient, what kind of a home do we expect to find her enter, and where located? Tenements, some of them called flats, or the upper low ceiling room of an indifferent lodging-house. The misery of existence in such buildings cannot be made to appear by me in its awful reality. It would require the graphic pen of a Dickens to so describe these most wretched places, and thereby arouse the just anger of civilized communities against both these generators of disease and their owners. Wealthy and generous contributors to every public charity may find in the erection and maintenance of suitable dwellings for worthy and industrious poor, not only methods of distributing alms, but so doing render multitudes happy and healthy, and afford protection to citizens at large from the dangers of zymotic disorders.

For from these dwellings go forth people with whom even the weathiest necessarily come in contact, in stores as work people, in cars and on ferryboats, and if their clothing be impregnated with contagious germs, are they not a menace to public health?

The effect upon a healthy organism of this mode of life is shown by a few days' occupancy of a room or apartments in these so-called "homes" of the poor. Apart from the dirt, poor ventilation, odors of cooking and pure *dirt smell*, an emanation exclusively pertaining to said localities, a wise proviso of the landlord has attached to each outer door a spring which closes the door upon the departure or entrance of any one.

The cellar, nowadays, since the order has been issued by boards of health to remove all vaults from the yard, becomes the water-closet for the entire house. Defective plumbing, and the carelessness of the tenants, render the atmospheric state of the halls as abominable as any nuisance yet abated by law. Water and sinks on each floor, frequently *in* the apartments, as matters of convenience to those renting, facilitate the pouring out into the room of all gases which sanitarians tell us are detrimental to health, and which propagate diseased states. Paint and whitewash come biennially, if the landlord is feeling plethoric in pocket.

Food and Clothing.—Those who board receive such homely (I would

I could call it, with the least regard to truth, wholesome and well-cooked) food as you might expect. Those who club together and keep house are too tired upon their return to prepare more than a cup of tea and some bread and butter. No meal appearing except on Sundays or holidays.

In regard to clothing, did it ever occur to us that good, warm underclothing is one of the unheard-of articles of wearing apparel among the first and third classes of our series, of whom we are now speaking. The scanty allowance for clothes has to be expended on externals, and I may add that even stockings are not worn by many who cannot actually afford to purchase. To those who contribute so much toward sending clothing to the heathen, it is perhaps an impertinence for a very humble doctor to declare that practical charity might *better* commence nearer home. To be brief—

We have in all this a condition of circumstances and surroundings as unfavorable as can be imagined, as they are contrary to all sanitary regulations and laws for the preservation of health. Can we for a moment suppose that these conditions have nothing to do with the general malaise of the shop-girl? Can we thrust these aside and content ourselves with the thought that if this woman has a chair or stool to sit and rest a few moments during the day, that she is thereby to become a model of health? Again, of fifty persons, who belong to the second class in families which the writer attends, there has not been a single one prostrated by illness serious in character or continued beyond three days, in two years past. This is confirmatory of the idea that these girls, working precisely the same hours, exposed to same alleged causation, standing, are not ill, because they have homes in the fullest sense of the word, and no mental excitement or prolonged strain upon their nervous systems. Moreover, this second class is fond of the same dissipation that the daughters of wealthier parents pursue. Their labor affords them clothing showy enough to make them appear to advantage at church sociables, private club parties, at concerts and theatrical performances, and it is not uncommon to find them participants of balls and parties four or five nights weekly. More than all, where, in the cases enumerated, do we discover the result of long-continued standing? Where are the uterine troubles which are claimed to be the outcome of this peculiar enforced position of body? Shop-girls of the middle class frequently cry out about the harshness of their lot, in about the same tone in which school-teachers, whose fathers are property owners to a large amount, declaim against the arduous (?) labor performed by them five hours daily and five days in the week, for ten months per year; but the writer has yet to learn of a single instance in which either of these unfortunate, hard-worked, well-to-do people ever voluntarily relinquished their place to some needy person, and thereby saved their health from impending destruction. No, gentlemen, the sentimentality of these philanthropic benefactors of the sex, who have so earnestly agitated the wrongs of women, is perchance another evidence that they deserve a definition given them some time since, viz., that philanthropists were those who were capable of preaching very long discourses upon others' wants and ills, and who are extremely anxious to relieve them by contributions from deluded people's pockets, not their own. The proofs here presented can be corroborated and verified by actual visitation, and we must not allow a so-called *gross* injustice, the alleged causation of every ill which renders life a burden, to conceal the truth which lies deeper, and which, in our opinion, is the fountain head of the misery and sickness and degradation the shop-girl unwillingly undergoes in her struggle for the God-given right of existence.

DISCUSSION.

DR. SEGUR expressed his thanks to the writer for his interesting and valuable paper. One or two suggestions occurred to him. While the doctor was reading his paper, presenting the diseases to which shop-girls were subject, he (Dr. Segur) was thinking of the diseases presented by another class of laboring women, as he had seen them in one of the hospitals, where many Irish domestics are received. He did not want to put aside the doctor's accurate tables or statements, but he thought that if the diseases of servant-girls, cooks, waitresses, etc., as he had seen them passing through the hospital for the past six or eight years, were tabulated, they would present very much such a table and proportion of diseases as that given in the paper. This was an additional reason why he was inclined to accept the view that standing was not a specially important or controlling element in the diseases of the shop-girl. Another point he wished to suggest. He sometimes crossed Catharine Ferry in the early morning or late in the afternoon, when these girls are going to or returning from their work in New York, and one feature had always struck him in the appearance of these girls, and that was, the very general existence of anæmia. He did not think any one could cross the ferry at the hours mentioned without being struck by the very large number who presented that appearance. In this respect they differed very decidedly from the servant-girls who came to the hospitals. How far the vitiated air in which the shop-girls worked was causative of this anæmia, and how far this condition might be due to the dietary that they had—that he believed they elected to have—was matter for consideration. It had been stated that such things as pastry, candy, confectionery, and the like, formed a large part of their diet—that they chose to eat these things. He asked Dr. Chace if anæmia had been a prominent feature among those whom he had seen in his practice.

DR. CHACE replied that the anæmia was very frequently present in the cases that he had met with. The cases that he had tabulated were all cases of real disease. In regard to the use of pastry and that kind of food, according to his experience in these cases, the girls, during the hour at noon, instead of returning home to dinner, would buy all kinds of articles of pastry; and this they did by clubbing together, and purchasing considerable quantities. To a certain extent, this might be the cause of their not being properly fed. But, on the other hand, their fathers and mothers were often to blame for this. Their food at home was very poor and unwholesome, and often badly cooked, and sometimes they return home to find no food at all prepared for them. It was no wonder that these girls should be sick. But the case was different with the girls of the second class that he had designated, where they worked simply from a love of dress, or for the sake of earning money, which they spend for various purposes. From diseases of all kinds this class was singularly free. The exercise that they had, the good food and the recreation that they were able to indulge in upon their return from labor, all seemed to promote health instead of being detrimental to it. In this respect they belong to the same class as well-fed servant-girls in well-to-do families, who are on their feet more continually, if anything, than the former. He had known instances, among the class called housekeepers, who never have an opportunity to rest at all; except during the actual time at table, they are never able to assume a sitting posture, and yet, among those of this class that he had had among his patients, he had yet to find a case of uterine disease. This whole subject had been started by people who desired to make a sensation. During the present session of the Legislature, they had been making tremendous efforts to compel employers to place seats in stores, so that the girls would not be obliged to stand; but he did not think that standing was the cause of the difficulty at all.

Dr. Squibb asked Dr. Chace if he had heard from his patients any complaint of insufficiency of water-closet accommodations. He knew of one or two stores where there was absolutely no water-closet.

Dr. Chace replied that that had been a frequent cause of complaint.

He (Dr. Squibb) had himself employed, during twenty-five years or more, various numbers of girls, from six to thirty-five or forty, and he did not think that in any class he knew of had the sickness been so small. They were never very robust people, but they were very unsickly. They were very healthy as a rule. They lost much less time than an equal number of men did from sickness. He thought the general trouble with shop-girls was that they did not wisely distribute their pay between their dress and their food. If they could be induced to spend less upon dress and more upon their food, they would probably be a more healthy class of people—that is to say, a more robust class. But in this country, where dress is so important to establish one's condition in life, or position in society, it is hardly to be wondered at that these girls should spend a very large proportion of their earnings upon dress, and a very small proportion upon their diet. Many of these girls, also, were fond of expensive amusements in the evening, and to these dress was more necessary than to those who did not attend the same kind of entertainments.

Dr. Walker remarked that as Dr. Squibb had the reputation of looking after the welfare of his shop-girls, his rooms being well ventilated, and there being plenty of light and considerable sunshine, he did not think that his testimony could be taken as representing the experience of all employers. Shop-girls placed in such exceptionally good surroundings are not likely to lose much time by sickness.

Dr. Stuart suggested that in any investigation of this subject of the health of working-women, the class of factory girls should be included for purposes of comparison. In a New England town where there was a hat or calico factory, the girls had better air; the factories were built in open spaces, where there was plenty of fresh air, and were well ventilated. The girls could board cheaply, and their wages were probably about equal to the wages of the similar class of workers in the city. Any thorough investigation of the subject would have to be carried into the country towns in order to arrive at exact data upon which to base any intelligent enactments in behalf of this class of people. The factory girls in these country towns probably stand as much as the girls in the city. Their hours of work are possibly a little less. So far as his observation went, their occupation was quite as wearisome as that of the city girl.

DR. WESTBROOK said that he had hesitated to say anything upon the subject, because it suggested so many ideas, and went over so large an amount of ground. Any one who had had to deal with this class of patients in a large dispensary practice must see the impossibilitity of getting up any profitable discussion upon it at a moment's notice. While he regarded the Doctor's paper as one of the most valuable and suggestive that had been presented to the Society, at the same time he thought that as a scientific paper it had very little value. It was a paper rich in suggestions, which he hoped would be followed out in future. But the Doctor's observations were limited, and his tables were not reliable. It should also be borne in mind in this investigation that the majority of females employed in these occupations were unmarried females, and he supposed it was fair to assume, even among this class, that the majority of them were virtuous females. Now we did not expect to find, and do not find, a very large proportion of uterine troubles among virgin females. He trusted that the Committee on Hygiene would take up this subject.

DR. PROUT observed that this discussion brought up a point in regard to the laboring women in foreign countries, northern Germany more especially. He had seen women there carrying loads in baskets on their shoulders, which seemed to him to be more than he could stand up under. He had, in consequence, asked a physician in Göttingen if uterine displacements were not prevalent among the women. The reply was, that they were very infrequent. Dr. Prout had noticed that the little children carried small baskets, and the larger children larger baskets, and so on up to the huge loads carried by the women, and he supposed it was by this gradual increase in size that the women were able to carry such heavy loads. They grow up under the basket. A friend who had been in the German merchant marine, and had traveled extensively, told him that in Pomerania he had found the strongest women he had seen. Some of them would take two large bags of potatoes, one under each arm, and carry them easily into the vessel—a load that he could not have pretended to carry. The endurance of these women seemed increased by habit or force of necessity. Severe muscular effort is not necessarily incompatible with health in women.

POINTS OF INTEREST IN MEDICO-LEGAL TRIALS.

BY JEROME WALKER, M. D.

Careful medical observers of the medico-legal trials, which have been brought into Brooklyn Courts within the last few years—trials in which physicians have sued for medical fees, have been tried for malpractice or have appeared as medical witnesses and medical experts—must, in looking over the results of such trials, feel chagrin rather than pleasure.

To be sure, as a rule, physicians sued for malpractice have "gained the cases" in which they were involved—but it has been at a cost of much time and money. *Some* medical witnesses and experts have gained notoriety and money. A very *few* of them have earned a reputation as clear, logical, cool-headed witnesses, or as impartial, scientific observers, or as men willing to tell "the whole truth and nothing but the truth," even if by so doing they seemed to endorse a rival practitioner, "dogma," "creed" or "party."

It is a matter of "common fame" that many lawyers to-day believe, and openly state, that "doctors can be hired to testify as they (the lawyers) wish them to; that certain experts are looked upon as entirely unreliable by the majority of physicians and lawyers, but are deemed desirable for "hiring" purposes; that some physicians go upon the stand unprepared to defend their own reputation and that of fellow practitioners. Histories of cases are imperfect or were written out after the trial began, instead of *at the time*, when professional services were rendered. Doctors "think," therefore, that they did so and so, cannot positively swear that they did, while, perhaps the sharper laity have written down and treasured up sayings and actions of the attending physician or physicians, have made a note of their "sins of omission and commission."

There is a prevalent tendency among physicians to become specialists; such a tendency has its good as well as its bad features—but with this tendency, comes the ambition to testify as an "expert," and young inexperienced specialists are pitted against older ones with a large practical experience, or against general practitioners whose "*special study*," of a subject has been more comprehensive and abiding, it may be, than the knowledge of the newly-fledged specialist.

The trades-union system of work is forcing itself into the domain of medicine. Specialists very wisely concentrate their forces, and unite under a special society banner for work; but they are very apt to taboo the opinion of a medical man, or even to testify against him if he presumes to speak knowingly of a subject in which they deal—while at the same time he is *not* a member of their society."

From time to time we read in the newspapers, that "Dr. or Prof. so and so, at the recent celebrated trial of ——— *vs.* ———, testified, and his testimony assumed the character of a lecture to medical students."

Undoubtedly it was a "success" for the doctor, yet such testimony, though learned, but strung out and full of technicalities, befogs and stupifies the average jurymen. He is likely not to consider it as of much account after all, when he sums up the evidence on both sides, in his own mind, and then his *sympathy* decides for the plaintiff or defendant, as the case may be, especially if such be a woman.

If we can all learn to testify to facts, or to advance opinions, in a plain, straightforward way, making plain to the jury what we do *do say*.

much will be accomplished. It might not be amiss to learn the "art of putting things," by means of a mock medico-legal trial in a medical college or society.

Every trial in which there has been a display of jealousy, or an evident airing of one's own opinions and theories, by one expert, as opposed to another—where diametrically opposite views on the same subject have been expressed—by physicians all considered equally good in the eyes of the people, every such trial does harm to the profession of medicine. For the sake of notoriety that such trials afford, it is said that a medical expert volunteered his services for one side of a case; that the wife of another boasted that her husband had been "retained" by one side.

It is reasonably certain that future juries will not be much, in intelligence, above the average of those who have preceded them. We must rely, therefore, for the honor of the profession and the protection of our *worthy* medical brethren, upon ourselves and the assistance of law-makers. Allow me, then, at this time to make a few suggestions, which will afford scope for discussion at the present meeting of the Society, or at a combined meeting of physicians and lawyers under the management of our Medico-legal Committee.

1st. In certain cases a jury of medical men should be obtained, if possible.

2d. Medical experts should be summoned and paid by the State, the experts acting as associate judges, assisting *the* judge to get at the truth.

3d. Certain cases might be referred to a commission, fashioned somewhat like the present Commissions in Lunacy.

4th. Experts called by the court to testify should be paid. In one State, Indiana, the Supreme Court has decided, "that under the Constitution the State has no right to take a man's particular services without compensation, and that the giving of expert medical testimony is a particular service within the meaning of the Constitution." (*Canada Lancet*, October 1, 1868, p. 64.)

5th. The office of coroner, with the system of coroners' juries now prevailing, should be abolished, as suggested by the President of the N. Y. State Society in 1879, and the system in vogue in Massachusetts be adopted.

6th. Life Insurance Companies have accumulated a mass of information relative to causes of death, the bearings of certain conditions upon the question of insanity or of longevity, facts proving or disproving the commission of suicide, etc., etc. At present this information, so useful in the court room, is inaccessible to the majority of physicians. Is it not possible for "medical examiners," individually or conjointly, to bring this material before this Society for our edification and learning.

7th. Cannot members in good standing in our Society be protected against irregulars by enforcing the registration law? If men are to be permitted to practice by license, is a license granted by some other county good in this county?

8th. The few instances in which examinations of supposed invalids have been ordered by the court, to be held in the presence of medical men, acting for the court, as "referees and conductors," have been appreciated by the profession interested on both sides of the cases.

It will be well in the future to exclude from the room at the time of examination every one other than the patient (and perhaps one friend), the examiners and the referee. It is related of a well-known lawyer, that on being asked if he did not wish to step up stairs and witness the examination before a referee of a lady by whom he was retained in the suit pending, replied, "No, it's no place for a lawyer; I can trust to *our* doctors to see fair play."

Physicians in general cannot expect to be treated by lawyers as judicially impartial in their testimony and opinions until there is ample evidence that physicians, as a class, study medico-legal subjects critically.

Neither can we expect to gain the confidence of juries until testimony and opinions are given in such a manner that they can be understood.

We cannot do justice to ourselves until every hindrance to the acquirement of *truth* is thrust aside.

THE MEDICAL SOCIETY OF THE COUNTY OF KINGS.

A regular meeting of the Medical Society of the County of Kings was held on Tuesday evening, May 17th, 1881, at Everett Hall, Dr. Jewett in the chair, and about 45 members present.

The minutes of the last meeting were read and approved.

The following proposals for membership were made: Dr. Edward H. Squibb, 251 Columbia Heights, by Dr. E. R. Squibb; Dr. F. A. Cowles, 230 South Fourth Street, E. D., and Dr. Ulick W. C. Burke, 374 Graham Avenue, E. D., by Dr. Russell; Dr. H. Plympton, Kings County Hospital, by Dr. H. L. Cochran; Dr. Havens B. Bayles, 363 State Street, Brooklyn, by Dr. Kene.

The Council reported acceptance to membership of the following: E. H. Bartley, M.D., L. I. C. H., 1879; Edward Grether, M.D., Univ. of Warzburg, 1871; Josephine A. Dupré, M.D., Women's Medical College, New York, 1880.

Dr. Prout then read his paper on "The Care of Eyes of New-born Infants." The discussion thereon was participated in by Drs. Walker, Burge, Schwarzenberg, Stuart, Mathewson, E. R. Squibb, F. H. Colton, Edson and Prout.

The second paper of the evening was read by Dr. Walker, subject, "Points of Interest in Medico-Legal Trials."

On motion of Dr. Rockwell the paper was referred to the Medico-Legal Committee. The President stated that that Committee is without a chairman, and appointed Dr. Walker to that position. Dr. Walker declined and was excused from taking the position.

Dr. Chace then read his paper on "The Diseases of Shop-Girls," being notes of private practice. The paper was discussed by Drs. Segur, Squibb, Walker, Stuart, B. F. Westbrook, Prout and Chace.

Dr. Hutchison's paper was then read, subject, "The Treatment of Genu-Valgum by Osteotomy," with presentation of cases. The cases, however, were not present, Dr. H. having been much delayed in attending the meeting. Photographs and instruments appropriate to the subject were exhibited.

The President announced as the order of business, at the next meeting, the Report of the Committee on Obstetrics, and requested that the members taking part in the discussion thereon submit their contributions in writing.

On motion the Society adjourned.

Ἀσκληπιὸς ῾ο Σωτὴρ

Χαρμα μέγ’ ανθρωποισι, κακων θελκτῆρ οδυναων.

Hymns of Homer, No. XVI.

PROLIFERATIONS.

——Dr. H. L. Bartlett has been appointed delegate to the British Medical Association by the A. M. A.

——The Transactions of the Medical Society of the State of New York.—By a recent purchase of a few volumes, the Society is now in possession of a full set of these Transactions.

——George Duncan, of 260 Pacific Street, the well-known Collector of this Society, is prepared to undertake the collection of the outstanding debts of physicians and merchants. The various Treasurers of this Society for fifteen years past will bear witness to Mr. Duncan's faithfulness and efficiency.

——Sunday, May 15th, Dr. Hesse had occasion to see *eight* cases of *poisoning*, caused by eating so-called *"canned corn beef."*

The meat was bought at a large store (corner Atlantic and Smith) by two different parties, Saturday night, between 8 and 9 P. M.

In the first case the meat was taken for supper by two adults Saturday night, and the symptoms of sickness came on about four hours later, and lasted till Sunday evening, consisting of vomiting, pain in the abdomen, and very frequent diarrheal passages.

The other party—a family of eight (six adults and two children)—partook of the meat Sunday night for supper, and showed symptoms of poisoning within three or four hours after, lasting with some of them till Monday night. The symptoms being similar: vomiting, great deal of pain in the abdomen, and very frequent diarrhea. Only two adults escaped sickness, or at least did not show any symptoms six hours after supper, and after having taken a dose of Ol. Ricini, never did show any.

The quantity of meat partaken was small—half a pound being divided among each party (the latter one of eight persons, as already mentioned). A small quantity of meat left by the first party looked normal, and none of the sick persons had noticed any disagreeable smell or taste; only one of the first party thought the color to be darker than usual.

——DR. HUTCHISON'S paper on Genu-Valgum will appear in the July number.

——AN OHIO CANDIDATE.—There is, no doubt, a great future before the enterprising ignoramus who penned the following. It is addressed to the author of an elementary book, and indicates the intention of coming over and helping the medical profession. Why not?

"Address —— Ohio.. Aprilie the ——.

"Dear Sir.. I thake Pleashure in Riting to you This morning stating that I have Bin Studing Your book for mor then a Year And I Prefer Your Works beyond All others that I have Ever Read.. I Want to obtaine good Studie and Git a diploma from some good Colledge.. Please Send Me a pamphlet giving terms Of the Studies and etc.

"Yourse truly — — —"

——THE JUNE MEETING will be held on the 21st. The Committee on Obstetrics will present for discussion the subject of Puerperal Hemorrhage.

The discussion will be opened in an introductory paper, by Dr. F. H. Stuart, the Chairman.

The subject will then be discussed by Dr. T. Gailliard Thomas, of New York.

Dr. Wm. Wallace will present the subject of Hemorrhage Before Labor.

Dr. A. S. Clarke, the subject of Hemorrhage During Labor.

Dr. J. R. Vanderveer, the subject of Hemorrhage After Labor.

The discussion will be continued by Drs. A. J. C. Skene. Wm. Gilfillan, J. H. H. Burge, J. E. Clark, G. W. Cushing, and others.

ODD NUMBERS OF JOURNALS NEEDED TO COMPLETE FILES.

The Librarian would be very glad to receive copies of the following journals, or would be pleased to negotiate for the same. A great favor to the Library would be conferred:

AMERICAN JOURNAL MEDICAL SCIENCES.

1846.—Oct.

LONDON LANCET.

Sept. 30th, 1837, to Nov. 12th, 1842, inclusive.
Apr. 1st, 1843, to Oct. 7th, 18
1847.—Dec.
1848.—Dec.
1849.—Jan., Feb., Mar., Apr., July, Sept., Oct., Dec.
1850.—Apr., June.

RANKING'S ABSTRACT OF THE MEDICAL SCIENCES.

Vol. 36.—July to December, 1862.
Vol. 37.—January to June, 1863.
Vol. 38.—July to December, 1863.
Vol. 39.—January to June, 1864.
Vol. 40.—July to December, 1864.
Vol. 41.—January to June, 1865.
Vol. 42.—July to December, 1865.
Vol. 43.—January to June, 1866.

MEDICAL AND SURGICAL REPORTER, (PHIL.)

1 to 101, inclusive, 103.

Pamphlets, Monographs, Essays, etc., on Medical Subjects are solicited, and if the name of the donor is known they will be acknowledged by the Librarian.

☞ **Revised to June 1, 1881.**

ADDRESS

LIBRARIAN MEDICAL SOCIETY COUNTY OF KINGS,
398 FULTON STREET,
Brooklyn, N. Y.

——THE REGULAR MONTHLY MEETINGS of the Medical Society of the County of Kings are held at 8 P. M. on the third Tuesday of each month, at Everett Hall, 398 Fulton Street.

The June meeting will be held on the 21st.

For Program, see page 96.

MEDICAL SOCIETY OF THE COUNTY OF KINGS.

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Vice-President	F. W. ROCKWELL, M.D., 6 Lafayette Ave.
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(1878 to 1882.)

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A. Sherwell,
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Chap. XI., Art. 2, of By-laws: "Any Member elected as Delegate to the Medical Society of the State of New York, who shall be unable to act as Delegate during two successive years, shall be considered to have vacated his position as Delegate."

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OBSTETRICS.

Drs. F. A. Stuart, A. S. Clarke, F. Palmer, W. Wallace, J. R. Vanderveer.

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Drs. W. E. Griffiths,
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J. A. Jenkins,
Drs. W. G. Russell,
N. Matson,
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PHYSICIANS' MUTUAL AID ASSOCIATION.

Drs. B. A. Segur, G. W. Wells, W. W. Reese, G. W. Baker, N. W. Leighton. A. Hutchins C. A. H. Szigethy.

PROCEEDINGS

OF THE

MEDICAL SOCIETY OF THE COUNTY OF KINGS.

VOL. VI. JULY, 1881. NO. 5.

THREE OPERATIONS FOR GENU-VALGUM BY MACEWEN'S METHOD.

J. C. HUTCHISON, M.D.

Dr. Macewen's operation for the relief of genu-valgum (intra condyloid osteotomy) was first described by him in the *Lancet*, March 30th, 1878, and subsequently in his book entitled "Osteotomy," published by Churchill in 1880.

It consists essentially in making a transverse section through the inner two-thirds of the condyloid femoral diaphysis with an osteotome, straightening the limb and retaining it in position until the healing process is completed. The steps of the operation are shown in these drawings copied from Macewen's book. The first "is a sketch of a case of genu-valgum, the internal condyle being lowered, owing to the curve of the lower third of the femur and the augmentation of osseous matter on the inner distal portion of the diaphysis. The second shows the form and breadth of the osseous incision made on the inner side of the limb by the osteotomes, extending to fully two-thirds of the osseous breadth. The third is the same limb after straightening, the cuneiform gap on the inner side being now filled up by the approximation of the separated surfaces, while a slight hiatus has been left on the *outer* side of the limb, *covered by* *periosteum.* In many cases there is actually no gap, properly speaking, left on the outer side, the osseous tissue being stretched or rarified, the one portion still interdigitating with the other, as is the case in green-stick fracture. When the bone is hard and brittle the slight hiatus is left."

The advantages of the operation are that "no bone is removed, the osseous tissue being merely condensed at each side; it in no way affects the articulation of the knee; it preserves the joint with its ligaments firm and compact; it is clear of the epiphysis and cuts no vessels requiring ligature." The instruments used, besides an ordinary sharp-pointed scalpel, suitable for penetrating at once to the bone, are a set of (3) osteotomes varying slightly in thickness (fig. 1) and a heavy mallet, made of lignum vitæ, which I here show. The mallet measures two inches by four and weighs one pound. These instruments Dr. Macewen had sent to me by his instrument maker, Mr. Macdonald, of Glasgow. They are now made by Tiemann. The first third or half of the incision is made by the largest instrument, and if it should become impacted it is withdrawn and the second is introduced into the groove made by the first, to divide the deeper layers of bone, and a third, still finer, may be used if necessary. I have not found it necessary to use more than one instrument.

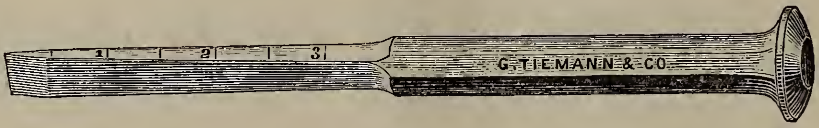

FIG. 1.

For the purpose of protecting the hands from the irritating effects of carbolic acid spray, I cover them with carbolized vassaline, 1 part to 10. This makes the hands slippery and the hold upon the handle of the chisel uncertain. In order to obviate this I now have the handle of the chisels covered with hard rubber, which is baked upon it and creased in various directions (fig. 2).

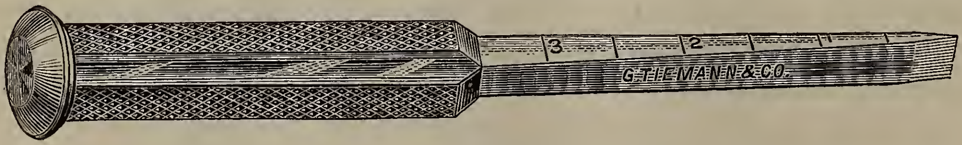

FIG. 2.

In performing the operations I am about to describe I followed Macewen's plan closely, except in the splint used, and with some slight modifications of the antiseptic dressing, which will be referred to hereafter. In performing an operation—one which the operator has not hitherto practiced—he should, in all fairness to the originator of the operation, rigidly adhere to the directions laid down—at least until sufficient experience has been acquired to justify modifications.

The first operation was done upon the right leg of a boy three and a half years old, who had double genu-valgum. He was first seen at the Brooklyn Orthopedic Dispensary, and was transferred to the Brooklyn City Hospital November 16th, 1880. His mother stated that he was perfectly well until teething began; after that he showed "general weakness," but was never seriously ill. He had walked only during the last six months. His parents had not been able to supply him with proper food. His mother is a vigorous woman, and has other children who are perfectly healthy. The father is not strong, but has no organic disease and no hereditary tendency. The grandparents are living, and enjoy good health. When admitted into the hospital the child had slight bronchitis, his appetite was poor, and he was pale, restless, and feverish. His physical condition is well represented in the accompanying photograph; the large square-shaped head, the pigeon breast, and the deformity of the legs are all very marked (fig. 3). He was kept in the hospital for the ten days preceding the operation, during which time his general condition was greatly improved by the use of syrup of lactophosphate of lime and an appropriate regimen.

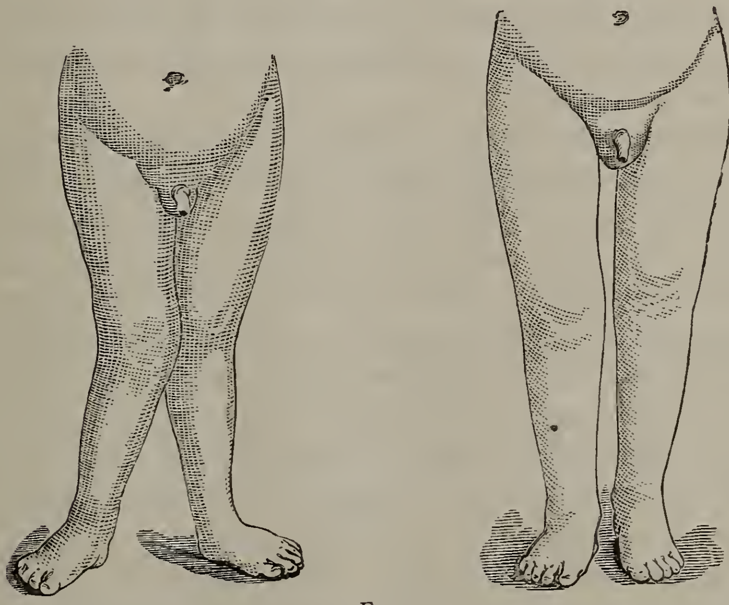

FIG. 3.

A. Before treatment.

B. Condition six months after operation.

The operation was done Nov. 27th, 1880. Anæsthesia having been produced by chloroform, the limb was rendered bloodless by surrounding the upper part of it with elastic tubing; it was then imbedded in a pillow of wet sand, which afforded a firm, unyielding support. One assistant fixed with a hand the upper part of the tibia, and another the upper part of the thigh. A longitudinal incision was made an inch in length directly to the bone, at a point where a line drawn a finger's breadth above the level of the upper border of the external condyle, and a line drawn parallel to, and half an inch in front of the tendon of the adductor magnus, bisect one another. This incision passes through the skin, cellular tissue and a few fibres of the vastus internus at its thinnest part. The osteotome was slipped by the side of the scalpel until it reached the bone; the knife was then withdrawn and the osteotome turned transversely to the long axis of the bone, care being used in turning it not to scrape off the periosteum. The edge of the osteotome was now carried over the bone until it reached the posterior internal border, when, by lowering the handle of the instrument, its entire cutting edge was applied, and it was made to penetrate from behind forward, and toward the outer side. The osteotome was then applied to the inner side of the bone, which it cut in a transverse direction, when it was directed from before backwards, toward the outer posterior angle of the femur. The bone was thus divided in a fan-like manner. The instrument was carried through the bone until the feeling and sound indicated that it had reached the hard outer layer upon the opposite side. This I had learned to appreciate from previous experiments on the cadaver.

The osteotome was removed and the wound covered by a sponge saturated with a solution of carbolic acid—one to forty—held in the left hand, while with the right—the left hand acting as a fulcrum—the limb was grasped near the ankle and jerked inward, snapping the outer layer of bone with a loud report. The bone was much harder than normal, and it required greater force to divide it than I had anticipated. This indicated that the rachitic condition had been arrested and calcareous deposits had taken place. The limb was straightened, the carbolized sponge secured in position by a bandage, and the elastic tubing which controlled the circulation was removed; the bleeding was inconsiderable. An assistant grasped the foot and ankle and extended the limb while the opposite leg was being operated upon. The wound of the right leg was then covered with Lister's protective, wet with the carbolic acid solution, and over this was placed a layer of marine lint, which was retained in position by an antiseptic bandage extending to the hip. Anterior and posterior splints of plaster of Paris were now applied to the whole length of the limb, which was held in proper position until the plaster set.

The second operation was then done on the left leg of the same patient in precisely the same manner, except that a mass of cellular tissue which protruded from the lips of the wound was excised with a pair of scissors curved on the flat. This left a concavity on the surface of the wound, which was filled by a blood-clot; this it was supposed would become organized. It did not, however, for reasons which we shall see hereafter. If the protective comes directly in contact with the protruded cellular tissue, no space is allowed for the blood-clot, and the healing will take place by granulation instead of by organization of the blood-clot. This leg was dressed in the same manner as the other, and the patient put to bed.

After the anæsthesia had passed away the patient moved his toes readily, and the sensation and circulation were normal. "The state of the toes must be carefully watched during the first forty-eight hours, and afterwards looked at daily" (Macewen). And if the circulation is interfered with, or sensation or mobility diminished, the dressings should be removed and reapplied.

Three hours after the operation the temperature was 101$\frac{1}{5}$°, and he was somewhat restless, but was quieted by an opiate.

On the third day, temperature 102, very restless, complains of pain in *left leg*. A fenestrum was made in the splint to expose the wound on the left leg, the dressing was removed, and with it came away the blood-clot; there was no pus. The wound was now dressed daily with carbolized vaseline, and soon healed by granulation. The splints were removed from the left leg on the nineteenth day, and he at once flexed the leg on the thigh and the thigh on the abdomen, and manifested his pleasure at the removal of restraint by kicking about quite vigorously. I considered it expedient to reapply the splints, and they were kept on until the end of four weeks after the operation.

The *right leg* was undisturbed for twenty-eight days, when the splints were removed. The wound in the soft parts had entirely healed by organization of the blood-clot, and the bone was quite firmly united, but the leg was not quite straight. I bent it inward under chloroform until it was straightened, and the splints were re-applied and kept on two weeks longer. When they were taken off the leg was straight, the union firm, movements of the knee-joint but slightly impaired, and he began to walk at once, aided by a chair, which he pushed in front of him.

He was discharged January 18, 1881, with the deformity entirely removed and his general condition greatly improved.

Third operation.—The patient was a boy three years old, who came to the Brooklyn Orthopedic Dispensary for treatment, and was put into the Brooklyn City Hospital for operation, February 28, 1881. The deformity was in the right limb, and is well shown in the accompanying very accurate sketch made by Acting House Surgeon Spencer (fig. 4). There was slight genu-valgum of the left leg, but it was not considered sufficient to require treatment. The boy is unusually large for his age, is well-formed, presenting no other indications of the rachitic diathesis; his hygienic surroundings have been fair, and he has enjoyed very good health. His parents are well, and their other children are healthy. His mother stated that both legs were quite straight when he began to walk, at eighteen months, but soon after this the deformities were noticeable.

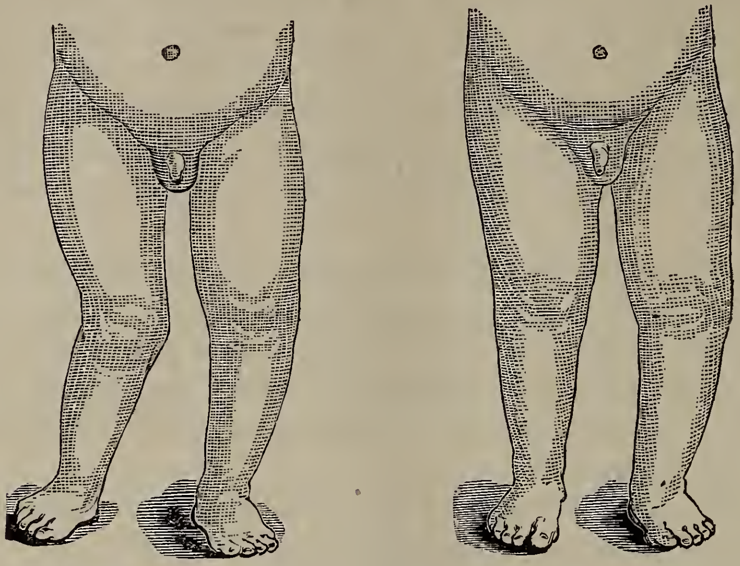

FIG. 4.

A. Before operation. B. After operation.

Osteotomy for genu-valgum was done on the right leg, March 4, 1881, in precisely the same manner as the preceding operations, and the wound was dressed in the same way, with the protective and marine lint; but, instead of fixing the limb by anterior and posterior splints of plaster of Paris, the Bavarian plaster splint was applied from the groin to the heel, leaving a fenestrum over the wound. The bone had reached the stage of eburnation, and it required a good deal of force to divide it.

No constitutional disturbance followed the operation, and, during the four weeks he was in bed, his general health was perfectly good; he had no pain, his appetite was unimpaired, his secretions and excretions were normal, and his temperature, which was noted twice daily, reached 99° only twice. The splints were not removed until twenty-eight days after the operation. The wound had entirely healed by organization of the blood-clot, the first dressing not having been changed; there was no pus. As soon as the splints were removed, the boy, of his own accord, at once flexed the knee and hip-joints and moved his leg freely. He was then put upon his feet, and, with a little assistance, took a few steps, without apparent pain or inconvenience ; and, on the following day, he walked the length of the ward, about thirty feet, with the aid of a stool, which he pushed before him. The position of the leg was normal, as may be seen from the accompanying illustration.

DISCUSSION

ON

PUERPERAL HEMORRHAGE,

Arranged by the Committee on Obstetrics of the Medical Society of the County of Kings.

PUERPERAL HEMORRHAGE.

BY F. H. STUART, M.D.

It has devolved upon me, as Chairman of your Committee on Obstetrics, to introduce the subject for discussion. This I shall do very briefly by raising a few questions germain, and possibly fundamental, to its consideration.

Puerperal hemorrhage is the most alarming and dangerous of the obstetric emergencies. To ward off, if possible, and to cope with this formidable accident, is the subject of our thought to-night.

Puerperal hemorrhage really includes all hemorrhages that occur during the whole period of utero-gestation. Your committee thought it best to somewhat limit the field, and so to exclude the hemorrhages of abortion. You are asked to consider hemorrhages that occur at about full term: before, during, and after labor.

In introducing the subject, I shall confine myself to a few general questions, for the reason that the topic has been subdivided, and the other members of the committee will open the discussion of the several points. I shall occupy but a few moments of your time, for I know that you are eager to greet and welcome our guest, who does us the honor of coming to discuss this important subject.

By puerperal hemorrhage is meant hemorrhage into the cavity of the uterus from the uterine vessels. This definition brings into one category all of the hemorrhages; and for the purpose of asking the question as to the cause or causes of the hemorrhage, we can consider them together. The separation of the placenta from the uterus is a rupture of blood-vessels, and these vessels are both numerous and of considerable size. Hemorrhage is fortunately a rare accident. Its consideration is nevertheless important, for it may cause death in five minutes, or it may be the cause of permanent ill-health and disability.

Just here let me raise a question, the answer to which I hope will enter into the discussion to-night: What is the *source* of hemorrhage? Many entertain the idea, which I think cannot be maintained, that much of it is from the surface of the placenta—in cases of placenta prævia, or of partially detached placenta. The structure of the placenta contradicts this notion, and the anatomy of the uterine vessels fully explains the occurrence of hemorrhage. I ask the question, chiefly in order that its answer may be accentuated. Correct understanding of it is the basis of rational treatment.

As to the causes of hemorrhage, many classifications may be made. Some of the causes may be called *mechanical,* as distinguished from *vital.* Of the former I enumerate unnatural site of placenta; premature, partial or complete separation of the placenta, and a too sudden emptying of the uterus, either by precipitate labor or too rapid delivery by the forceps. But the great majority of hemorrhages are from what I have called *vital* causes—causes dependent upon the condition of the nervous and vascular systems. (The nervous system includes, because it acts upon, the muscular system.) It is upon these systems that the greatest stress is laid by pregnancy. If these preserve their integrity during what Dr. Barnes has called "the physiological experiment," and until the experiment is entirely completed, the patient is safe. Their integrity and harmonious action is nature's means of prevention.

Another question I ask: Are puerperal hemorrhages analogous to other hemorrhages? If we so consider them, much of the mystery is cleared away. Treatment can be based upon general principles. I say *analogous.* The peculiar function of the uterus is associated with some peculiarities of anatomy, and requires special study. Nevertheless, I think general principles can be applied readily in most cases of puerperal hemorrhage. I lay stress upon this point for the reason that often, in discussing the question of treatment, this or that remedy is vaunted as a specific. There are many remedies of great efficacy. If we consider puerperal hemorrhage as simply *a* hemorrhage, the selection of remedies will be determined by expediency, and we shall not be hampered in the treatment of these any more than we are in meeting ordinary surgical hemorrhage. And again, we shall in certain cases adopt prophylactic measures just as we do in general surgery. I cannot elaborate this subject. I merely suggest the line of thought.

Before passing on to consider the subject of treatment, and as preliminary to it, let me ask: How does nature prevent hemorrhage? In other words, What is the condition of the uterus in cases of labor unattended by hemorrhage? Understanding this, we shall seek in cases of hemorrhage to bring about a like condition. In brief, the uterus is in a state of tonic spasm. Such is the anatomy of the blood-vessels of the uterus that if this is the condition no hemorrhage can take place. If the opposite condition exists, and in addition there is abnormal fluidity of the blood, hemorrhage will be rapidly fatal. Or the blood pressure may be excessive and hemorrhage may occur from excess of vascular tension. Again recurs the idea that these cases should be studied with reference to the application of general principles.

Just here let me call your attention to the fact that the danger, present or prospective, is not in proportion to the *amount* of blood lost. Patients weakened by previous ill health or disease may have fatal syncope from a comparatively small loss of blood. On the other hand, full-blooded, healthy patients may lose an enormous quantity of blood (even to syncope) and rapidly rally and recover without an untoward symptom. Of this latter class of cases I will relate one when I speak of treatment.

The next question I ask is: How shall we *prevent* hemorrhage? This is, of course, pertinent only to cases of so-called "avoidable" hemorrhage. Aside from prophylaxis there are three things to do: (*a*) Empty the uterus *slowly*; (*b*) Administer ergot when the head is thoroughly distending the perineum; (*c*) Compress the uterus with the hand or hands over the fundus. So many cases of hemorrhage occur from imperfect or irregular contractions due to conditions of the nervous system, or to adhesions, or the presence of foreign bodies (tissue) in the wall of the uterus, that each of these precautions is advisable.

I turn now finally to speak briefly of the treatment of puerperal hemorrhage. The remedies recommended are legion. A few are in common use. Some of these, as before indicated, are or have been regarded by their advocates as specifics. Of these last I mention cold, ergot, iron (injections), and latest, heat—as by hot water. Nitrite of amyl also has a strenuous advocate. I must not occupy your time by discussing these. I leave that to those whom you are eager to hear. I only ask: Are the remedies in use *always* to be relied upon? Are they safe—even though successful in controlling hemorrhage? Are they feasible—that is, are they readily carried or easily obtainable? What shall be our armamentarium against puerperal hemorrhage?

I close by referring to two cases that occurred within two weeks in my practice.

Case 1st.—A young Scotch woman, primipara, was taken in labor at midnight. I was called at 8 in the morning. I found the head in the hollow of the sacrum in the L. O. P. position. Uterine contractions regular and strong. The os undilated. No "bag of waters," though the fluid had not escaped. I found it impossible to rectify the position. The os was finally dilated, but no progress was made, and at 2 P. M. I applied the forceps under chloroform, having previously given a dose of ergot. I had a good deal of difficulty in delivering, as the perineum was rigid, being one of those without much muscle. The perineum was ruptured. I noticed during the delivery that the uterus did not contract. Immediately after the delivery of the child (a large, healthy, living boy), she began to flood. The placenta was loose in the grasp of the cervix. Compression of the uterus availed nothing. The patient, who had begun to come out from the anæsthesia, suddenly became deathly pale and covered with cold sweat. The blood ran in a stream. Death seemed imminent. I had called for the syringe and hot water. The syringe would not work. Seizing a large sponge near at hand, I filled it with hot water and crowded it into the uterus. As if by magic the hemorrhage was checked, and in three to five minutes the patient rallied sufficiently to swallow some brandy. The next day she looked as well as if she had had the most natural delivery possible.

I attribute the arrest of the hemorrhage to two things: first, the pressure of the sponge, corresponding to what has so long been practiced—the introduction of the hand into the uterus; and second, to the stimulating effect of the hot water. The use of a sponge instead of a syringe will, I think, be found more convenient and efficacious.

Case 2d.—Was one where the placenta was partially over the os. She came into the Lying-in Ward of the Long Island College Hospital in labor. The house physician recognized an abnormal condition and notified me of the fact. The os was dilated to about one and a half inches. Within it could distinctly be felt the placenta, which had just covered the os. It was attached to the left and posterior side of the cervical zone. When labor had continued twenty-four hours, the os being dilatable, the patient somewhat exhausted, and the head just engaged at the brim, I delivered her with forceps with the greatest ease. The placenta was readily expressed. In this case there was *no hemorrhage at all.* The closest questioning revealed the fact that none had occurred at any time. During the last week of utero-gestation there was slight leucorrhœa.

ANTE- AND POST-PARTUM HEMORRHAGE.

BY W. GILFILLAN, M.D.

After the very exhaustive manner in which this subject has been introduced, and the able way in which it has been handled by the eminent gentlemen who have participated in its discussion, there remains but little which I can add. I shall, therefore, very briefly lay before the Society the results of my personal experience. The statistics and the literature of the subject I must leave to those better qualified to discuss.

In presenting the results of one's personal experience I am well aware that we are apt to give a one-sided view of things; but in a Society like this, the presentation by other members of their personal observations will furnish the best corrective.

I shall confine my remarks to hemorrhage during labor and to post-partum hemorrhage, and shall exclude placenta prævia, as, during the whole course of my practice, I have fortunately only met with one case.

And first, as to hemorrhage during labor: It is an event of rather rare occurrence, and, when the amount is trifling, may scarcely call for any active interference; arising, as it does most frequently, from a detachment of the placenta over a limited space, a moderate amount of blood escapes per vaginam, but some coagulates at the point of separation of the placenta, and by nature's hemostatics the ruptured vessels are sealed up, further hemorrhage prevented, and the labor terminates in the usual way. If we inspect the placenta after it has been expelled and the labor completed, we find a dark, moderately firm coagulum adhering to the placenta at that point where it was separated from the uterine wall.

In some cases the flow is so free that the drain on the system would be too exhausting before labor was completed; and here we must use more active means. In such cases the usual treatment is to give ergot, and, if the membranes are not ruptured, to rupture them. I have always found these means sufficient, and the hemorrhage quickly controlled.

There is, however, another form of hemorrhage, which is less frequent, but much more alarming in its results, and which demands very prompt attention. I refer to *concealed hemorrhage.* Here we have a detachment of the placenta over a considerable space, but situated near the centre of the placenta. At all events, there is no outlet for the effused blood, as the placenta is adherent all around its circumference. A large amount of blood is poured out in this way, and the fœtus usually dies in a short time, and is born quite exsanguine.

The danger to the mother is very great, and generally the only way of saving her life is by rapid delivery. Usually there is no show of hemorrhage, as you will readily perceive; but the indications of alarming internal hemorrhage are very marked, and I will not stop to particularize them. If this occurs, even in the early stage of labor, it will be found to have a marked effect in relaxing the os uteri, or, at least, in making it readily dilatable.

If in the later stages of labor, the os rapidly relaxes and delivery may be effected very quickly. I have met two such cases in my practice—both in multiparæ.

In one case the hemorrhage was ascribable to a fall down-stairs the previous day; in the other, the only ascertainable cause was a violent mental emotion of a depressing nature.

At the risk of being tedious, I will give a brief sketch of these cases:

No. 1.—Mrs. W., a large, lymphatic lady, with her seventh child. No previous children for five or six years. Was taken with pains in the morning, and I saw her about ten o'clock, when the os uteri was about the size of a quarter. I called about 2 P. M., and found the pains more frequent. She complained of weakness, and a sharp pain in left side. About 3½ P. M. the nurse called me from the next room, saying the patient was alarmingly ill. I found her with all the evidences of internal hemorrhage—blanched face, sighing respiration, very feeble pulse, etc. I found a swelling on left side of uterus, quite perceptible to the touch. As matters were very urgent, I sent to the nearest physician for assistance; but meantime went ahead, which was to give a good dose of brandy and ergot, and resort to instant delivery. I passed up my hand; ruptured the membranes, which were still intact; seized the feet, and delivered almost in as short time as I take to describe it. There was a great rush of liquor amnii and blood. The placenta I brought away immediately, without any effort. The child was dead, and the mother in a very weak state, scarcely breathing. At this time word came that the physician I had sent for was not at home. I passed a lump of ice into the uterus, to restrain the hemorrhage; and that, with the use of ergot, had the desired effect. To be brief, she gradually gained strength, but had a very tedious attack of phlegmasia dolens in both legs. For more than a year she was very anæmic. She is now alive and well—fourteen years since the birth of that child—but never again pregnant.

The next case was similar, but not so severe.

No. 2.—Mrs. B. had four healthy children previously. Was at full time. The previous day accidentally fell down a few steps. When I was called I found her with all the symptoms of internal hemorrhage—blanched skin and feeble pulse, os the size of a dollar, but dilatable; no outward hemorrhage. I fortunately procured the assistance of Dr. Wm. Wallace in a few minutes. I then proceeded to deliver by podalic version, which was quickly accomplished. The child was dead. The mother was very feeble and exhausted, but made a very good recovery, and subsequently had several children with natural labors.

In both these cases I believe immediate delivery was the only thing which could save the mother's life. The lives of the children had been sacrificed by the extensive detachment of the placenta. I have rather dwelt on these cases, as I think there is not much reference to such, either in text-books or in current literature.

In reference to post-partum hemorrhage:

I have seen considerable of it; but certainly much less of late years. A variety of reasons may be given to account for this diminution. I have always followed the same method in removing the placenta, but of later years I have very generally given (as I suppose all do) a dose of ergot, either soon before the child is born or else immediately after it. And this, I think, insures a firm and lasting contraction of the uterus, and so prevents hemorrhage. In addition to that, ergot no doubt possesses the power of contracting the small blood-vessels, by acting on their muscular coats. Besides, it powerfully acts on the ganglia of the sympathetic nerve of the sacral and lumbar plexuses and their branches, and so prevents that atony and dilatation of the vessels which favor hemorrhage.

The advance of the science of chemistry, and of the art of pharmacy, has placed us in possession of a very reliable remedy—the fluid extract of ergot; so that now every one relies on it, more or less. Twenty years ago the state of affairs was rather different—ergot was generally met with in the crude form. It was hard to pulverize, and it was difficult to make an infusion which was worth anything, and often the drug itself was poor, from improper selection, or worthless from long keeping. At that time many doubted whether ergot had much power as an oxytocic, or anything else. Now, however, its preparations are so carefully made that its virtue is indisputable, and may perhaps be, at the present time, overestimated.

When I find hemorrhage not controlled by one or two doses of ergot, combined with an alcoholic stimulant, I introduce (if it can be got) a piece of ice into the uterus—taking care that it has no sharp edges. This incites uterine contraction very promptly, and I have never found it fail to arrest hemorrhage when so used. Of course, as the ice melts, the resulting water comes away colored with blood, and may give the semblance of hemorrhage continuing; but a little discrimination will obviate that mistake. Firm pressure of the hand over the uterus through the abdominal parietes, grasping it, if possible, in the hand, is very efficacious. I have several times used compression of the abdominal aorta, which can be done very easily in the recently-delivered female. This seems to assist;

but its exact value I can't estimate correctly, as other means were used at the same time. The means I have just mentioned are all I have ever found it necessary to employ. I have never used styptic injections of iron, or anything else. In addition, I always employ alcoholic stimulants very freely in these cases, and the amount which patients will tolerate under such circumstances is most surprising.

Concealed hemorrhage may occur after delivery. There may be little, if any, flow externally; but it accumulates in the uterus, and has often caused death when least expected. The hand placed over the abdomen should detect this, especially if there are the constitutional symptoms of hemorrhage. In such a case I think nothing can compare with the extrusion of the clots and effused blood, by the introduction of the hand into the cavity of the uterus.

This thoroughly empties the uterus, and, by its mechanical irritation, excites uterine contraction. Ice, and the other remedies mentioned above, are then to be used very assiduously.

And at this point I would draw attention to the fact that the symptoms and the danger from loss of blood bear no relation to the amount of blood lost. We sometimes find a very large amount (enough to alarm one) lost without any constitutional symptoms; while at other times a very small amount will induce the most dangerous and alarming symptoms. This latter class of cases I have met with where the patient was anæmic from the existence of renal complication, or some other disease affecting profoundly the character of the circulating fluid. Under such conditions more than once I have seen the loss of little more than a pint of blood produce alarming symptoms, and require close and continuous attention on the part of the accoucheur, for several hours, to rally the patient. I have never seen this end fatally; but I can very easily understand how it may do so. In such instances the hypodermic injection of ergotine, or of fluid extract of ergot, assists us very much.

Having spoken of the means employed to control hemorrhage, we may look at the causes which produce hemorrhage, or which predispose to its occurrence.

These naturally divide themselves into two classes—the first being "*Some disordered condition in the uterus itself*," such as small fibroid tumors, either in the neck of the womb or in the body of the uterus, lying close to the mucous lining, by preventing firm and equal contraction, may induce hemorrhage.

If the patient has previously had any uterine complaint we should be doubly watchful, as I think the proportion of such patients who have hemorrhage is rather high.

It is frequently stated that prolonged labor predisposes to hemorrhage.

My experience is exactly the reverse. I think a very rapid labor is far more apt to be followed by hemorrhage, and I would explain this apparent anomaly by the fact that the spinal nerves in such cases have not been sufficiently roused up to maintain that steady contraction of the uterus and the small vessels which necessarily precludes hemorrhage.

Of the *causes in the general system which predispose to hemorrhage,* there are many, and they may act alone or in conjunction. At the head of this list I should be inclined to place *mental emotion,* including everything which may act on the nervous system, either suddenly, by shock, or slowly, as the result of prolonged worry and excitement.

After this would come *anœmia* from any cause, and more especially when it is the result of, or is associated with, *renal complication.* Such patients I have always found to be very liable to flow freely, besides being very easily prostrated by a slight hemorrhage.

Another cause is undoubtedly *malarial* poisoning. This is frequently associated with anæmia; but it may, and often does, exist, without any marked anæmic signs.

I have noted these causes, as their recognition before labor begins should lead us to adopt treatment appropriate to their relief, and so avoid the occurrence of hemorrhage. I think a very great deal can be done in this way, when the opportunity is afforded; but, unfortunately, the obstetrician has frequently to face the inexorable fact of hemorrhage in or after labor, without any chance at previous treatment.

I have endeavored to place before the Society the facts which I have observed during an active professional life, and as free from theoretical considerations as may be—bearing in mind, however, the aphorism of the illustrious Cullen: "That no man ever practiced medicine without some theory as to its use."

In conclusion, I would crave the indulgence of the Society as to the fragmentary manner in which I have handled this subject; but would plead a want of time to put it in a more compacted form.

POST-PARTUM HEMORRHAGE.

BY J. R. VANDERVEER, M.D.

Having been deputized by the Chairman of the Committee on Obstetrics, to open the discussion of post-partum hemorrhage, I am fully aware that I am addressing an audience, the practical acquaintance of a great part of which with the subject under consideration has been greater than my own. My experience of post-partum hemorrhage has been obtained entirely in private practice, commencing in 1853, but for the last decade I have been engaged but little in obstetrics; in some of the years of this later period I have not seen a case. I shall, in the limited time allowed, present a few points in etiology, prophylaxis and treatment. In so doing I shall confine my attention to that variety of hemorrhage arising from uterine inertia, so called, uncomplicated with adventitious growths in the walls or on the free surfaces of the womb.

Where no physical impediment exists to the due tonic contraction of the walls of the uterus after the completion of the third stage of labor, it is obvious that the failure of the organ to perform its functional duty must be due to nervous failure and muscular exhaustion, and in this connection it would be highly important to ascertain what proportion of post-partum floodings follow protracted labors, and what speedy ones, and what number of the protracted cases were due to lingering first stage, and the effect of such delay upon the nervous system of the patient. It has been said that a parturient woman would, probably, if interrogated, describe the first stage of labor as *suffering*, and the second as *effort*. If that truly expresses the parturient feeling, it should be our aim to mitigate *suffering* as much as lies in our power, that *effort* may be aided and shortened, so that some reserve of strength may remain *after* the effort has resulted in *accomplishment*.

My own experience has been that post-partum hemorrhage and precedent uterine inertia has almost invariably followed a tedious and wearing first stage, both in primiparæ and pluriparæ. Although by no means denying the occurrence of such cases, I have to state that I have never found undue hemorrhage to follow a quick labor, though I have encountered some of remarkable brevity, of which I present one, from among many others almost as brief. This patient gave birth to her infant, on two consecutive occasions, before my arrival on the scene, although residing in the immediate vicinity, and being promptly summoned and the call as promptly answered. On the second occasion, her labor commencing about 11 A. M., I found her, on my arrival, 11.15 o'clock, dressed and lying on the floor, with her new-born babe and its placenta just as the parturient act had left them. On neither of these occasions was there flooding, primary or secondary. The patient was a hard-working woman of American birth, performing her own domestic duties, and in the enjoyment of perfect health, mental and physical, and I may add without an ounce superfluous of adipose tissue. The occasions referred to were her fourth and fifth confinements, and she informed me that all her labors had been short, though not as short as the last two. I have on several occasions found severe hemorrhage follow violent uterine contraction at the end of the second stage, after a lingering first stage, and second tedious until the head distended the perineum, without signs of great exhaustion on the part of the patient until after her final effort, which left her in condition similar to that of nervous shock. All engaged in obstetric practice must have occasionally fallen in with parturient women who, from some idiosyncrasy, were predisposed to flow after labor; to those of this class whom I have encountered, I will refer in discussing treatment.

I have little or nothing to say as derived from personal experience, as to the cause of *secondary post-partum hæmorrhage*, as I have been in contact with only slight cases, not at all critical, and arising from an imprudence on the part of the patient or nurse. Those arising from constitutional causes, as suggested by Dr. Fordyce Barker, or those produced by retained portions of placenta, fibrinous clots, or the like, I have never met with.

An obstetrician who can have supervision over his patient during the whole or the greater part of her period of utero-gestation, is almost master of the situation when at length parturition arrives, as his charge can be put, as far as circumstances admit, in the best training for the coming mental and physical trial.

How far Dr. Fordyce Barker's recommendation of belladonna, as proposed by him in 1861, for the relief of wearing and annoying pains and loss of sleep in the last fortnight of utero-gestation is followed at present, I do not know, but whatever means are used to attain this object are of the greatest value to the patient. I have never used belladonna to my recollection; the chief agents which I have employed have been attention to the nutritive functions, opium in small doses, and, in cases of much loss of sleep, chloral. I consider of much service the separation of the membranes as far as the finger will reach when the first stage has fairly commenced (as proposed by Dr. Andrew Inglis, in the *Edinburgh Medical Journal*, July, 1865), thus allowing the bag of waters to more surely and gradually dilate the os by hydrostatic force *a tergo*.

It would be rather a task for the ingenuity of man to suggest a remedy for post-partum hemorrhage which has not been already proposed or used in the past fifty years, as the literature of obstetrics abundantly at-tests; when there is seeming novelty it appears only in the *manner* of using a remedial agent; for example, ergot and ether hypodermically, instead of the former by the mouth and rectum, and the latter by spray, etc. External pressure and manipulation of the uterus, especially after the close of the second stage, to expel the placenta and blood clots, and to cause or assist the normal tonic contraction of the organ, has now become axiomatic in the formula, so I pass it without further comment. With those predisposed to post-partum flowing, I have been so fortunate as to succeed with ergot uncombined, administered in the usual way, just before the close of the second stage, and after the delivery of the placenta, and sometimes again repeated. I think, if called upon to use ergot again in similar cases, I would combine it with nux vomica, whether employed hypodermically or otherwise.

The sooner the placenta leaves the uterus when detached from its wall, the better. It has been my habit, when the patient exhibited the first sign of uterine exhaustion, and before the uterus had time to be greatly distended by clots, to pass the hand into its cavity and detach the placenta, if adherent partially, and grasp it when not, and allow it and the hand together to be expelled by the uterine contractions generally excited, and then immediately to administer a stimulant, with or without ergot or opium, as indicated. When the uterus did not contract promptly, the hand was again introduced (the placenta being brought away), holding a piece of ice, and rapidly passed around the uterine walls until contraction followed. Although these means have sufficed in every case in which I have used them, still the fact remains that all this has been done in many cases, and still hemorrhage has continued, and the question arises, what means *then* seem most likely to arouse the dormant uterus? and the only answer is, some *other irritant.* It seems to me that the idea expressed by Dr. T. G. Thomas, that the injection of various substances, in full strength or dilute, into the cavity of the uterus in post-partum hemorrhage, act as direct *irritants*, and so awaken to contraction the exhausted walls of the womb, is correct, and that alcohol alone would be probably as efficacious as, say, tincture of iodine; and this seems to be proven, or at least in part, as long ago as 1847, as reported in the *British Medical Times*, April 3 of that year, in two cases: in the first, after the failure of pressure, grasping the uterus, ergot, and the introduction of the hand, brandy diluted one-third with water was introduced on a saturated rag into the uterine cavity; the second introduction was followed by prompt contractions; in the other case reported rum was the agent used with a like gratifying result. In the *London Lancet*, Dec., 1848, Dr. Tyler Smith proposed the injection of a solution of zinci sulph. with the view of ascertaining whether its direct action upon the mucous membrane and nerves of the uterus would be similar to that of its action upon the pneumogastric nerve in the stomach, and he also suggested a trial of ergot in the same manner for arousing uterine activity, as Velpeau was said to have excited parturient action by placing this agent on the sphincter ani of the domestic fowl.

I find that Dr. W. B. Atkinson, in Therapeutics of Gynecology and Obstetrics, refers to the success of Drs. Harrison and Strudworth with ergot in intra-uterine injection (Squibb's ext. ergotæ fluidæ, ℥ss. to water ℥iv.). As before stated, my personal experience with secondary post-partum hemorrhage has been very limited; therefore, instead of consuming valuable time in surmises and suggestions, I surrender the subject to the experts, and, having performed my allotted part of opening the discussion of post-partum hemorrhage by a "short paper," I pass the subject over to the consideration of the Society.

PLACENTA PRÆVIA.

BY W. WALLACE, M.D.

I have been requested to introduce for your discussion the subject of placenta prævia, or unavoidable hemorrhage. In the first place, it is important to have a definition which is satisfactory. Dr. Churchill limits the term to cases where the placenta is placed wholly or partially over the os uteri. Dr. Playfair says: "By placenta prævia we mean the insertion of the placenta to the lower segment of the uterine cavity, so that part of it is situated wholly or partially over the os uteri." The term "lower segment" here used is entirely unnecessary so long as the placenta must be wholly or partially over the os uteri. So that the moderately old and one of the modern writers are in accord. Cazeaux evidently does not restrict the term in this way, but includes cases where the placenta is "attached to the lower part of the womb, or some part adjacent to the internal orifice." M. Jacquemier explains the causes of unavoidable hemorrhage after careful study of the growth and development of uterus and placenta. "During the earlier months the body of the uterus is pyriform; towards the close of pregnancy it is perfectly ovoidal." He also states the fact that the development of the placenta is far more rapid in the first six than in the last three months. He says: "This double circumstance seems to me quite sufficient to account for the production of hemorrhage; for when the placenta is attached to the fundus its growth is simultaneous with the enlargement of that portion of the uterine wall on which it is implanted, and it is evident that no hemorrhage need occur; but when the afterbirth is inserted over the cervix uteri, or some adjacent point, the contrary must necessarily ensue; because the growth of the placenta is nearly completed, whilst a considerable extension of the lower third of the womb has yet to take place. Of course the placenta can no longer participate in this rapid development by conforming to the increase of the uterus, and by following the extension of the wall on which it is inserted, and hence it spreads out from the centre towards the circumference. The fissures between the cotyledons become larger, and its different lobes are thus widely separated; but the growth of the inferior wall of the uterus is so rapid in the later months that this mechanical enlargement of the placenta is no longer sufficient to prevent the tension of the utero-placental vessels, or of the cellular tissue in which they ramify; and the tension being ultimately carried to an extreme, all the cellulo-vascular adhesions give way and become ruptured; thus giving rise to hemorrhage. So that we can account for hemorrhage that occurs where the placenta is attached to the lower part of the womb, or some point adjacent to the internal orifice, for it is not because the afterbirth is implanted over the cervix that flooding takes place during the later months of pregnancy, but *because it is in relation with the lower third of uterus.*"

This seems to me the most rational theory on which to explain the hemorrhage in placenta prævia, and in accordance with it we must not limit the term only to cases where the placenta is in whole or part in contact with internal os uteri.

With this brief introduction, I will now proceed to relate the histories of six cases which have occurred in my own practice.

Case No. 1.—Mrs. D., æt. 26; third labor.

Saw this patient for the first time Aug. 6, 1866, at 6 A. M. Found placenta presenting. Great flooding between the pains, which were *few* and *weak.* Had been flowing since previous afternoon. Os size of a silver dollar. Membranes unruptured. Dilated os digitally. It yielded speedily, and very soon I had my hand within uterus. Dr. Wm. Gilfillan, who came to assist me, now arrived, and, with his consent and advice, I proceeded to perform version. Before doing so, however, I separated placenta completely, and withdrew it. I now got hold of a leg, and found an arm presenting with it. Pushed up arm and pulled down other leg, and in a little while the child was born dead. Patient is in a state of semi-syncope. No anæsthetic used. Uterus contracted firmly, and there was no further flowing. Patient finally made good recovery.

Case No. 2.—Mrs. M., æt. 29; sixth labor.

On Dec. 22, 1868, at 6 A. M., I was called to see this patient. I found her standing on the floor with chamber-pot under her, into which she was flooding profusely. Was told that she had been taken so an hour before, while in church. She does not expect her confinement for six weeks. *She has had no pains.* On examination, I found a considerable coagulum in vagina. Os admits two fingers, but is very high up. To reach it the entire hand must be in the vagina. I discover the placenta on right side of uterus, *a little distance from the os.* It is separated from the uterus as far as finger can reach. Slight pains come on during examination, and then flooding increases. Hand is kept in vagina for an hour, while fingers dilate os. The hand acts as a tampon, and almost completely stops the flowing. At 7 A. M. I found I could safely leave her, and did so for a short period. On return, found there had been very little hemorrhage. No pains during my absence. I now attempted again to dilate os digitally. I had better success, and soon found head the presenting part. Having ruptured membranes, head came fully over os, and from this time there was no more flooding. Liquor amnii escaped in large quantities, and pains soon came on of good strength. Os still dilates slowly, and I again leave her for a time, and on my return, at 12.30 P. M., I find but little progress made. Head pressing well against os all round. Patient complains of being very weak. I should like to use forceps, but os is not sufficiently patulous, and is surprisingly rigid for a case where so much blood has been lost. Called again at 4 P. M. Not much change, though pains are stronger. At 5.50 P. M. os fully dilated. At 6 P. M. babe born *dead.* Immediately before placenta came a large clot. No post-partum hemorrhage.

Case No. 3.—Mrs. C., æt. 28; third labor; seven months pregnant.

March 1st, 1870, on being called to this woman, I am informed that she has been flowing incessantly for six weeks. She is now sitting before the fire with a pool of blood on the floor. On examination, I find os admits one finger, and on left side I feel the placenta partly detached. She is very pale and weak, and has had several fainting spells. Gave general directions, and ordered morphine and ergot, and left, telling them to send for me in case hemorrhage increased. *She has had no pains.* Heard nothing more of the case till the 4th, three days after my previous visit. It was an hour and a half before I reached the house. I then found that labor had come on, and had terminated some little time previous to my arrival. Babe was alive, but being two months premature, as well as from other causes, it lived only two hours. This patient finally made a good recovery.

Case No. 4.—Mrs. D. æt. 30; fourth labor.

Called 7 P. M., Dec. 11, 1872. Found patient flooding copiously. It had commenced only fifteen minutes before my arrival. *Has had no pains.* On examination, os very high up; admits two fingers. Placenta presenting, and partially detached from front and left side. Sent for Dr. Read, and meantime dilated all I could. At 7.20 P. M. could pass three fingers within os. At 7.40 four fingers passed. Membranes entire, and head presenting, but not engaged. Dr. Read not coming, I sent for Dr. McElroy. At 8.15 P. M. I got entire hand within uterus. There has been very little blood lost, as my hand has not been removed from vagina from the time I arrived till Dr. McElroy came, at 8 P. M. Fœtal heart heard at 7.45 P. M. in left inguinal region. Now that the entire hand is within uterine cavity, I find placenta completely detached. Removed it, and then attempted to get hold of a foot. Not succeeding readily in this, I decided to use forceps. I had no difficulty in applying them, but considerable traction was necessary to remove babe. It was accomplished in ten minutes. Babe was dead, although its heart beat for about ten minutes five or six beats per minute. It never respired, though various means of resuscitation were had recourse to. No anæsthetic used, and patient never had a pain from first to last.

Case No. 5.—Mrs. McD., æt. 25; third labor.

Called at 8 A. M., Oct. 27, 1873. Was told the patient had been flooding all night; also, that she had had a slight hemorrhage ten days ago. She lacks still three weeks of full term. Bed shows indications of great loss of blood. *Has had no pains whatever.* Os admits two fingers, and towards left side placenta is felt partially detached. Flowing is still quite profuse. I used digital dilatation, and in half an hour my hand was in uterus. Up till this time I had been unable to make out the presentation, owing to placenta being in the way, and presenting part being high up. The bag of waters is still unbroken, and acts as a tampon, so that from this time there is no more hemorrhage. Auscultation shows fœtal heart to right of middle line, and head is felt in right iliac region. While making out presentation, waters escaped, and the first thing I felt was a loop of cord coming down. I immediately decided on version, and in a very few minutes the babe was born alive. The patient made an excellent recovery.

Case No. 6.—Mrs. H., æt. 35; seventh labor.

Called at 2 A. M., March 14, 1878. Half an hour before I was sent for, the patient had occasion to get out of bed to attend to one of her children. She immediately felt a profuse flow of blood, and sent for me. *She has had no pains so far.* Os admits two fingers. Membranes entire. Head presenting, but not engaged. Patient is weak and faint —partly, I believe, from the fact that two weeks ago she bled profusely from a varicose vein. I tried digital dilatation for an hour, but os was unyielding. Whilst I remained scarcely any blood was lost. This being so, and os being so rigid, and the patient's home not far from mine, I left, and returned at 8 A. M. I found her in very much the same condition—very weak, and still no pains. Os seems more dilatable. I sent for Dr. McCorkle, and, on consultation, it was decided to deliver her as speedily as possible. Os dilated pretty readily, and, on getting hand within uterus, I discover the placenta completely detached and lying between babe's head and shoulder. Large coagula are also in uterus. I immediately turned, and in a few minutes babe was born dead. Immediately following babe came placenta, together with a large quantity of coagulated and fluid blood. Uterus contracted pretty well, and no more external hemorrhage took place. The patient, however, never rallied, and died one hour after delivery.

I was for a time puzzled whether to include this case among those of placenta prævia or not; but, on due consideration, I decided to do so. Had I seen this woman for the first time when the os was sufficiently dilated to get my hand within uterus, and there found placenta lying as it was, between babe's head and shoulder, might I not, without hesitation, classify it as one of placenta prævia ? for case No. 4 is just such another, only that when I first saw her I felt the placenta presenting, and when, later on, I came to deliver, I found the placenta completely separated, as in the present case. Practically, where was there any difference ? The treatment, I think, should be the same in both cases.

Herewith is presented a tabular synopsis of the six cases, which I will not read. On analyzing these cases I find that five were more or less premature. All occurred in multiparæ. Flooding lasted in one case only fifteen minutes when first seen, and in one it was said to have been constantly present for six weeks; in the others for various periods—these two being the extremes. In five of the cases there were no pains from first to last, so that here we lose one of the so-called differential points between accidental and unavoidable hemorrhage. As regards treatment: Nature, unaided, accomplished delivery in one case. In one, after digital dilatation had been made use of, nature accomplished the remainder. In three, version was used. In one, forceps. In all but one I dilated digitally, and in the only one that ended fatally to the mother, dilatation was tried for an hour, and without advantage. Results: Five mothers living and one dead. Three children were born dead. One had heartbeat for ten minutes, but no respiration took place. One lived for two hours, but being a seven-months' child, had a poor chance for life, even under more favorable conditions. And one is still alive. In none of the cases was any anæsthetic made use of.

Synopsis of Cases of Placenta Prævia.

General Facts.	Treatment.	Result to Mother.	Result to Child.
Case No. 1. Third labor. Flooding sixteen hours. *Pains few and weak.*	Digital dilatation and version.	Living.	Dead.
Case No. 2. Sixth labor. Flooding one hour. Six weeks premature. *No pains.*	Digital dilatation. Os very rigid. Dilated very slowly. Head presented, and when it became engaged, no more hemorrhage took place. Delivery natural.	Living.	Dead.
Case No. 3. Third labor. Flooding six weeks. Os admits only one finger. *No pains.* Two months premature.	Nature unaided accomplished delivery three days after first visit.	Living.	Born alive, but being 2 months premature and weak, lived only two hours.
Case No. 4. Fourth labor. Full term. Flooding only fifteen minutes before my arrival. *No pains.* Os admits two fingers. Placenta on left side partly separated. When hand was fully introduced found placenta entirely detached.	Digital dilatation. Removed placenta before attempting delivery of babe. *Forceps.*	Living.	Heart beat for ten minutes, but no respirations took place.
Case No. 5. Third labor. Three weeks premature. Flooding copiously eight or ten hours. *No pains whatever.*	Digital dilatation. In half hour hand entered uterus. Liq. amnii not having escaped, and babe's heart being distinctly audible, although a head presentation, I decided on version as probably the more speedy means of delivery, and performed it.	Living.	Living.
Case No. 6. Seventh labor. Full term. Flooding half an hour. Os admits two fingers, but very rigid. Dilated an hour with little result. Head presentation. *No pains.*	Digital dilatation, and when hand could enter uterus, version.	Dead.	Dead.

A few words on the treatment of this most serious complication of labor. In cases where the hemorrhage is at all profuse, I believe the best plan is to deliver as speedily as possible, and by the method that in each case seems the most feasible. Shall we separate or not the placenta, partially or entirely? In answer to this I will read from the *Edinburgh Medical Journal* for January, 1881, an extract from a review of a paper by Prof. Alex. Simpson: "The author with some warmth supports the utility of the treatment by partial separation of the placenta, as recommended by Sir James Simpson and Dr. Barnes, as a means of arresting bleeding. It occurs to us, however, that his argument, founded upon bleeding continuing from vessels when partially torn and ceasing when they are completely divided, when applied to the placenta is very like attempting to cut the end off a stick. It is very doubtful whether, when a portion of the placenta is torn off completely by an operator, a fresh portion of vessels is not partially opened into at the same time. In that case, where can the gain be? It looks well on paper to speak of the placenta being made up of cotyledons, as demonstrated by anatomists, but how can an obstetrician follow out the limits of the cotyledons at every effort to obliterate others? We agree with the author, that every case of placenta prævia needs special consideration in regard to its treatment, and that the treatment even frequently needs to be altered at different steps in the same case. But the more we know and see of this complication, the more we feel assured that all attempts at partial separation are worse than useless, and that complete separation is an operation which no imaginable circumstances could warrant. For if it is possible to separate the whole placenta, it is possible to deliver by turning, without doing so; and if there is not room to deliver by turning, it is simply idle to talk of being able to separate the placenta completely. It cannot be done." This reviewer makes use of vigorous language, but I believe his principles and practice are both correct.

CAUSES OF PUERPERAL HEMORRHAGE.

BY A. J. C. SKENE, M.D.

I intend, on this occasion, to direct your attention to the etiology of puerperal hemorrhage, but I can do little more, in the time at my command, than name the various causes without fully discussing any of them.

However, if I can present this part of the subject concisely and give due prominence to some points which have apparently been held in the background, I may help towards a more thorough comprehension of the whole subject.

Certain states of the general organization predispose to puerperal hemorrhage, and prominent among these are chlorosis and the hemorrhagic diathesis, conditions which are frequently combined in the same subject. Neither of these states alone, or even when combined, tend in any marked degree to cause profuse hemorrhage, but they predispose to less free and persistent bleedings, which are difficult to control. These constitutional conditions tend also to secondary hemorrhages, which occur several days after parturition. Clinical observations among this class of cases have led me to believe that chlorotic women are more than ordinarily liable to miscarriages and to hemorrhages before delivery at term.

One can easily understand that in those in whom the circulation is feeble, the uterine and placental nutrition would be imperfect, and hence the bond of union between the mother and embryo or child insecure. On that account there is unusual liability to hemorrhage from partial separation of the placenta or membranes from slight injuries. This cause of hemorrhage is somewhat analogous to that due to syphilis, although in a less marked degree. When chlorosis is associated with the hemorrhagic diathesis, the causative relations of these conditions to puerperal hemorrhage are so marked that further comment is unnecessary.

Imperfect development of the sexual organs, especially of the uterus, is perhaps the most important of all the predisposing causes of puerperal hemorrhage. The character of function depends upon the quantity and quality of the organization. The more perfect the structure the more surely will the function be well performed. It may then be rationally inferred that imperfect and irregular muscular action of the uterus is likely to occur in cases in which the development is incomplete, and clinical observations confirm this impression. We know that there is as great a variety in the character of the structure and function of the sexual organs in women as in their organs of digestion, and in proportion to the imperfection of development of the uterus, so will be the predisposition to puerperal hemorrhage under certain circumstances. I have had an opportunity to observe post-partum hemorrhages from irregular uterine contractions in several cases whose condition of uterine development was previously known to me. Two of these I had treated for flexions caused by arrest of development, and in several others the growth of the uterine walls during gestation was incomplete. In the first two there was a want of symmetry in the quantity of muscular tissue, and in the others there was a deficiency of the muscular walls generally.

The labors of the former were characterized by irregular uterine action, and that of the latter by feeble and markedly intermittent contractions. In all of them there was post-partum hemorrhage.

The relations of irregular and defective uterine contractions to puerperal hemorrhage are fully described in our books, and hence need not be referred to here.

Peculiar anatomical conditions of the blood-vessels in the uterus occasionally give rise to hemorrhage; although this is, perhaps, one of the most rare of all the causes now under consideration. In this connection it would be interesting to review the anatomy of the circulation in the uterus, and the mechanism by which venous hemorrhage is prevented after delivery, but I must take it for granted that all are familiar with that part of the subject. Allusion to this will suffice to show that any marked deviation from the normal arrangement in the vascular supply of the uterus, either as the result of malformation or disease, might favor puerperal hemorrhage. Be that as it may, we know that hemorrhage takes place when the only apparent cause is the peculiar state of the blood supply. I have seen four cases of post-partum hemorrhage, in which the only recognized cause was an abnormal vascularity due to fibroid tumors of the uterus. In each case the uterus was emptied of its contents, and the muscular contractions were all sufficient in tonicity and equality of distribution, and still there was hemorrhage, due, as I believe, to the abnormal vascularity. I remember still another case of post-partum hemorrhage, due apparently to the same cause. The patient was known to have a marked varicose condition of the veins of the vagina and cervix uteri, and perhaps of the whole uterus. She became pregnant, and, after delivery, had hemorrhage, which could not be attributed to any other cause.

In offering these remarks upon this cause of hemorrhage, I simply desire to call attention to it—knowing that my views may be considered as rather speculative, and requiring confirmation before being accepted.

Inversion of the lower zone of the uterus as a cause of hemorrhage deserves a passing notice in this connection. All obstetricians have observed that the cervix uteri remains relaxed after the body of the post-partum uterus has firmly contracted. It occasionally occurs that the lower zone of the uterus also fails to contract in harmony with the body of the organ; but, on the contrary, there is a slight inversion, the lower portion of the body of the uterus settling down into the cervix. Now, although hemorrhage does not take place in all those cases of partial inversion, it occasionally occurs. Why it should take place in some cases and not in others is not clearly understood. Perhaps the extent of the inversion may account for it; or, again, laceration of the superficial coats of the uterus may be the cause. Whatever the explanation may be, the fact that hemorrhage frequently occurs under these circumstances is sufficient to suggest that the inversion is the cause.

Premature and retarded ripening of the placenta plays an important part in the causation of hemorrhage. I use the term ripening, because the process by which the placenta is made to separate from the uterus so closely resembles that by which the stems of ripe fruit and the autumn leaves are cut off from the parent branches. When this ripening takes place prematurely, the placenta is easily separated from the uterus by slight injuries, and ante-partum hemorrhage takes place.

On the other hand, if the ripening is retarded, and the patient comes to her confinement with a placenta firmly united to the uterus, there is difficulty in separating it. Strong and repeated uterine efforts sometimes fail to detach it, and it is necessary then to resort to manual delivery.

This mode of removing the placenta is almost always attended with hemorrhage, and it is frequently followed by it. The hemorrhage which follows is generally due to portions of the placenta which have been left; but I believe that the site of a placenta which has been separated before being fully ripe, is more disposed to bleed than when the separation is easy and natural.

There are still other causes of puerperal hemorrhage, but they are so fully discussed in our text-books that I need only name them. To do that even is needless; but as my object was to group together these causes, the list will only be completed by adding the following:

Imperfect innovation, either from a defective nervous system or exhaustion from a laborious delivery; unfavorable location of the placenta; retention of portions of the placenta or membranes, and wounds of the maternal structures.

TREATMENT OF POST-PARTUM HEMORRHAGE.

BY J. J. LAMADRID,. M.D.

My own experience long since convinced me that post-partum hemorrhage is, to a great extent, the result of carelessness and improper management. This accident can usually be prevented by proper precautions taken during the third stage of labor, particularly so where the patient is known to have been subject to flooding. The chief indication in the management of such cases is to encourage and insure thorough and permanent closure of the uterus immediately after the birth of the child, as then the probability of hemorrhage is extremely small. In some cases, however, there is found a profuse, persistent hemorrhage, although the womb is found fairly contracted. In such cases further investigation will reveal the origin of the flow. It may be due to lacerations of the cervix, to ruptured blood-vessel in the vagina, in the lacerated perineum, or even in the labia. Post-partum hemorrhage from the uterine sinuses is of venous blood, while that from laceration of the cervix is arterial. The distinction is important, and may be useful where doubts exist as to the diagnosis between hemorrhage from the venous sinuses and from the ruptured arteries in laceration of the cervix.

The management of post-partum hemorrhage is preventive and curative. The preventive measures are, to a certain extent, hygienic. Thus, if the woman is plethoric, and has bled profusely at former labors, mild saline cathartics and diuretics are indicated; at the same time she must be kept upon a low diet for some time previous to confinement. On the other hand, if she is anæmic, some of the preparations of iron, in combination with one of the bitter tonics, or mineral acids, must be administered. Also stimulants, plenty of good nourishing food, and moderate outdoor exercise, if the weather is pleasant. Prof. Penrose recommends that when the labor proves tedious, it is to be hastened by the judicious use of the forceps. If it is too rapid, the endeavor is made to render it slower by anæsthetics, etc.

It has been my rule in all cases to make firm, steady, gentle pressure externally over the fundus-uteri immediately after the birth of the child. Generally the placenta is soon expelled, the womb readily contracts, and hemorrhage is thus prevented. If there is a tendency to undue relaxation of that organ after it once has contracted, the pressure with the hand is kept up without interruption, and until there is no fear that the hemorrhage will recur. At the same time I have been accustomed, in all labors, to administer from half to a teaspoonful of Squibb's fluid extract of ergot as soon as the child is born, and another dose following the expulsion of the placenta, to stimulate tonic uterine contractions, and thus lessen the chances of coagula being retained in utero, and the possibility of any after hemorrhage. If the woman is subject to flooding, the ergot should be given just before the child is born, when the presentation is far advanced, or pressing against the perineum. Ergot being occasionally uncertain in its action, and requiring at least twenty minutes before it will act, in urgent cases I have used it hypodermically with speedier and more gratifying results. When the above means have not proved effective, the introduction into the uterine cavity of pieces of ice, together with the use of iced cloths, or lumps of ice applied externally upon the lower part of the abdomen, have been the means of arresting the flooding at once. If it still persists, firm pressure is then made with one hand over the fundus, and with the other remove from the vagina and uterus all clots found there collected or retained. At the same time, another piece of ice about the size of a small egg may be carried up and left into the uterine cavity. On two occasions, when ice could not be obtained, common vinegar was used with most decided effect—it checked the hemorrhage immediately. This is applied, as recommended by Prof. Penrose, with a piece of rag dipped into a cup of vinegar, and then carried up into the uterus and squeezed; or a lemon will answer the same purpose. This is pared first, gashed in numerous places, and thus passed up into the womb and squeezed.

Recently I had occasion to try the hot-water injections recommended by Dr. A. H. Smith, of Philadelphia, by means of which a very profuse flooding was stopped effectually, after other means had failed. In this case it was noticed that the womb had a tendency to contract, and relax as soon as manual pressure was removed from the fundus.

My experience with this agent in the above case was equally gratifying. It is recommended to use the water at a temperature at from 105° to 120° F., and the amount of injection continued until the return stream is clear. Before introducing the vagina nozzle, however, care must be taken to force the air out of the syringe thoroughly before it is used. The metallic tube is passed to the fundus-uteri, the fundus being grasped during the introduction of the tube. The continuance and frequency of the repetition of the injection must depend on the promptness and permanence of the uterine contraction.

A word or two as regards concealed hemorrhage. In these cases, as we all know, the blood which escapes from the patulous orifices of the vessels on the inner surface of the uterus becomes coagulated at the os-tincæ, which it plugs up, the hemorrhage thus prevented from escaping externally goes on, and the tonic uterine contractions being absent, it distends the womb, and the quantity thus abstracted from the system becomes so great that the patient may die at once, or fall into a state of syncope, from which she can be revived only by the most prompt measures. There are always urgent and desperate cases over which one must act at once by selecting those means which are nearest and ready at hand. Thus the right hand is promptly and resolutely carried up into the vagina, through the internal os up into the uterus, to break up the coagulum found there formed and retained, letting the fragments pass by the palm of the hand, and detaining this within the uterus until it is expelled by the uterine contractions, which in the meantime may further be encouraged by the use of iced cloths applications upon the abdomen, and by firm pressure made over the fundus, in fact by all possible means known to incite the tonic contractions of the uterus, and thus cause it to close up the open venous orifices. In these cases ergot administered hypodermically acts quicker and more satisfactorily. As regards the use of stimulants and opium, these are generally employed with decided advantage, but when, or the proper time to give them, one must be governed by the condition of the patient.

It is hardly necessary to allude to the position the woman should be placed in, since we all know how important this is in the treatment of this form of hemorrhage.

I will now pass on to the consideration of the other means which have been recommended or suggested instead, or as being more effectual when others have failed. Thus all astringent preparations have been used with more or less success. The tincture of capsicum in ʒi. doses, it is said, will prove the best of stimulants in atony. Ergot has already been alluded to, but Dr. Harrison, of New York, and others, have recommended its use in the form of intra-uterine injections in the following manner: "Remove coagula first, then with a Davidson syringe wash out all blood with cold water, and quickly inject into the uterine cavity *f.* ℥ss. Squibb's fluid extract of ergot with water ℥iv. Spirits of turpentine in tablespoonful doses has been recommended by Dr. J. G. Swayne, of London, and used with decided benefit. Dr. William Donovan, of Edinburgh, and others speak highly of tincture cannabis Indica in doses of gtts. xx p. r. n., and says he never knew it to fail. Tincture of iodine is also highly extolled by Dr. Trask and others; applied or used as an injection, he claims it is by far the safest and most efficient remedy. One correspondent of the Toledo *Medical and Surgical Journal*, however, asks the question, How much of the effect is due to the iodine, and how much to the alcohol of which the tincture of iodine is largely composed? The same correspondent urges the injections of pure alcohol, which he considers as little hurtful and much more apt to be found quickly when needed.

Ipecacuanha given in large doses is known, by producing rapid emesis, to cause strong contractions in uterine inertia and thus to promptly check the hemorrhage. Prof. Fordyce Barker recommends the tincture nux vomica in large doses (gtts. xx), together with fluid extract of ergot (gtts. xxx) every half hour, until assured that the uterus is well contracted. But, as Prof. Bartholow properly remarks in his Materia Medica, "It is obvious that no more than two or three doses of (nux vomica) such strength will be safe."

Injections of iced water into the rectum, or into the uterus itself, are means which have frequently succeeded in arresting uterine hemorrhage. The application of the child to the breast has been strongly recommended by Dr. Rigby. Others have reported interesting cases in which all means had failed to contract the uterus in primiparous cases until the child was applied to the breast.

Dr. Kerr has reported a case of severe post-partum hemorrhage in the *British Medical Journal*, November 1, 1869, in which the patient was restored from a state of collapse by the inhalation of five minims of nitrite of amyl, whilst the flow was immediately arrested. He was led to adopt this method of treatment by the report of Dr. Koeler's use of warm fomentations to the head in cases of uterine hemorrhage, to prevent anæmia of the brain and heart. In either case the rationale of the treatment is probably to be found in the rapid dilatation of the cerebral vessels.

Dr. Wilson, of Baltimore, urges the introduction of the hand within the uterus, and raking the surface which has been occupied by the placenta with the finger nails; he says: " In any future case of post-partum hemorrhage, where I cannot produce prompt contractions of the uterus, or where the contractions are clonic and not tonic, I would not waste time with the usual manipulations in its cavity to excite contractions, or wait for ice or other styptic remedies. I would promptly use my hand as a curette to the placental surface, confidently expecting prompt arrest of the hemorrhage." He says that in one case no further hemorrhage occurred, though the uterus did not contract, and its mouth remained open for nearly an hour after this operation.

Injections of a powerful styptic, such as the tincture ferri chloride, or what is better, the liquor ferri persulphate, is another agent highly spoken of by many continental authorities, but is little thought of or practiced in this country for reasons well known to us all. As we all know it controls the flow by coagulating the blood, which plugs up the uterine sinuses.

Professors Von Hecker, of Munich, and Thompson, of New York, claim to have obtained excellent results from the application of ether spray over the hypogastrium.

Electricity and galvanism have been found of decided advantage, and on many occasions succeeded when every other means had failed. This has, at the last moment, when the woman was sinking, brought on uterine contractions, stopped the flooding, and saved her life. One of the poles is placed over the fundus, and the other over the lumbar region, or on the perineum, or, what has been found more efficient, one of the poles is introduced in the vagina and applied to the os-uteri, and the other is placed over the fundus, or on the back. The power should be sufficiently strong to produce contraction, and the application must be continued till the contraction remains after the pole is withdrawn.

Playfare, in his System of Midwifery, as regards to pressure, says: "Dr. Hamilton, of Falkirk, has advocated another method of applying pressure over the womb, viz.: "It consists in passing the fingers of the right hand up in the posterior cul-de-sac of the vagina, so as to reach the posterior surface of the uterus, while counter pressure is exercised by the left hand through the abdomen. The anterior and posterior wall of the uterus are thus closely pressed together."

When every other means have failed, pressure on the abdominal aorta with the fingers, or with an aortic tourniquet, has been recommended and used with good success in very serious cases. Playfair says: "Boudelocque, who was a strong advocate of this procedure, states that he has, on several occasions, controlled an otherwise intractable hemorrhage in this way, and that he, on one occasion, kept up compression for four consecutive hours." It is evident that in such cases one or two assistants are necessary to relieve one another when one of them is fatigued.

Naturally this plan is easier to execute in thin, than in stout or fleshy persons, as, in the latter, on account of there being a thick tegumentary covering of fat, or where the abdominal walls are large, loose and pendolous, or the omentum is loaded with adipose tissue, or where excessive pain is felt from the manipulations necessary for the aortic compression, it not only makes the abdominal walls less depressible, but through the same cause and the enlargement of the abdomen, makes it more difficult to find and compress thoroughly the abdominal aorta. In these cases the following plan has been found to act very beneficially. This consists in grasping the womb as firmly as possible, and by means of it the artery is compressed against the vertebræ, thus substituting the uterus as the compressing medium.

Prof. Guillon de Coze* has suggested another method which can be employed when the above plan has failed, or when the aorta cannot be compressed directly, or where the entire uterus cannot be made the direct medium of compression. This method, as far as I can learn, no reference to it has been made in any of the English text-books and journals at my disposal. It consists in introducing the right hand into the uterus, through which a more immediate and effective pressure is made upon the aorta, by depressing this between the posterior wall of the womb and the lumbar vertebræ. As yet I have had no occasion for trying this procedure. I am inclined, however, to think well of it, as there is no doubt of its being practicable and advantageous, from the fact that two important indications can be accomplished at once, viz., it intercepts the flow of blood through the most direct pressure that can be made upon the aorta, with only the intervention of the posterior uterine wall, while the hand thus introduced within the uterus excites that organ to contraction, or acts as a uterine irritator.

Finally, the transfusion of blood, or the intra-venous injection of milk in place of blood, as recommended by Dr. T. G. Thomas, has been the means of saving the lives of many desperate cases, after every other means had failed, or in cases in which the loss of blood had been excessive, and with very little hope for saving them.

In conclusion, I wish to call attention to the fact that too much reliance should not be placed on the value of compression, as this is nothing but a mechanical means which is employed, very proper no doubt, for interrupting rapidly the flowing, but evidently without any action upon the contraction of the uterus. It is a powerful means against this form of hemorrhage, but useless against uterine inertia, which, as we all know, is the chief cause of this accident. Its utility, however, cannot be denied, as by means of it a temporary dike, as it were, is thus formed, which opposes the destructive current, and thus as supplementing, rather than curative, and without superseding other and more radical plans of treatment, it should be employed when necessary. In the meantime the administration of ergot, either hypodermically or otherwise, must not be forgotten while other methods are being adopted, as by it the uterine fibres are awakened to contraction, and consequently closure of the sinuses is thus insured. Sometimes electricity, the hypogastric pressure or friction, and the introduction of the hand within the uterus are sufficient to rouse the uterine inertia; these, however, without the aid of ergot, are almost worth nothing; therefore, to incite and to keep up uterine contraction, this powerful agent, first of all, together with pressure over the fundus, must be employed in the treatment of post-partum hemorrhage.

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* Guillon Presse Med., 1842; or Vide Guia Practico de la Partus, 2d edition, 1870. Madrid: by Luciano Penard.

HEMORRHAGE DURING LABOR.

BY A. S. CLARKE, M.D.

Naturally enough, hemorrhage during labor is much less frequent than at any other portion of the period of gestation, but it is not, for that reason, any less important. It can only arise from premature separation of the placenta, or some accident involving the maternal soft parts (independently of placenta prævia, the consideration of which is made a separate matter in the discussion of this evening).

The so-called *accidental hemorrhage* furnishes the larger proportion of cases of hemorrhage during labor. It arises from detachment of a normally situated placenta, and is rather more liable to occur before labor has begun, than during it. At any time in the last three months of utero-gestation this complication may be met with, as during that time the relation of uterus and placenta is changing, the adhesion being gradually weakened. If, from any cause, while this is going on, a small portion of placenta becomes separated from the uterine walls, effusion of blood is the result, and, as it increases in quantity, causes mechanically still more separation, and opportunity for the escape of still larger quantities. If the separation extends far enough to loosen the placental margin, the blood will escape between membranes and uterine walls, and so make known the nature of the accident. But more frequently the margin remains intact, and the blood is pent up between placenta and uterus, and only makes its presence known by the constitutional symptoms which, fortunately, are generally pretty direct and easily made out, if the hemorrhage is excessive. It is needless for me to go into details in this matter, as my duty is simply to outline the subject, leaving causes, symptoms and treatment for the gentlemen who will discuss it later in the evening. Of course the only remedy is in securing prompt and efficient uterine contraction, and just here comes, to my mind, the principal difficulty. This accident generally occurs in women of feeble constitution, or relaxed fibre from repeated child-bearing, or from some abnormal condition of blood—hence they are but ill able to bear the shock of serious operation. All authorities agree that the uterus should be emptied of its contents as speedily as consistent with the condition of the patient, but undue haste may increase the collapse, and cause instant death. Dilatation of the cervix, by Barnes' method (after rupture of the membranes, which should be done at the outset), to be followed, as soon as may be with safety, either by version (the bi-polar method if possible), or the forceps if the head is low down. It is often difficult to secure firm contraction, owing to the condition of the uterus, and authorities differ in their suggestions in this regard. Dr. Barnes recommends strongly the application of a styptic to the entire cavity, and kneading and compressing the uterus to control hemorrhage. Ergot is used by some, and objected to by others, on account of its depressing effect on an already depressed patient. These points of treatment, I hope, will be brought out in the discussion this evening, that we may hear what methods have given the best results in the hands of gentlemen who have had experience in these cases. I doubt if the styptic plan is one which meets with much favor, except under circumstances where all else is likely to fail.

Rupture of the uterus comes next in order as a cause of hemorrhage during labor, and, like the accident we have just considered, may occur at any time during the last three months of gestation. It also happens most frequently in the same class of patients, being seldom seen in a primipara. The statistics of Churchill give it as often as once in about thirteen hundred cases, but I think this a higher average than we meet with in this country at the present time. The rupture before labor does not concern us at this stage. Aside from natural causes, as relaxed condition of uterine fibre from child-bearing or degeneration from any cause, rigidity of the cervix and deformed pelvis, or closure of cervix by fibroid tumors, etc., it is doubtless comparatively often caused by the injudicious use of ergot, or by operative procedures, as application of forceps before the cervix is sufficiently dilated, or the introduction of the hand within the cavity in performing version. It is often, indeed generally spontaneous, but I have no doubt is many times brought about by these means, especially by the use of ergot where any mechanical impediment exists to the speedy and easy termination of the labor. While the symptoms to which it gives rise are varied, it is not difficult of recognition. The hemorrhage, which is the factor immediately concerning us at present, is usually excessive, but may be almost entirely internal, very little escaping from the vagina. The indications are, of course, to complete the removal of the fœtus, either per vaginam or by laparotomy, according to the situation in which it may be found after the rupture. The accident proves fatal in a large majority of cases, though I was once told by a medical gentleman that he had encountered it unmistakably twice in the same patient. As to its prevention, much may be done by agents which will reduce the force of uterine contraction, if only we can early enough suspect the danger of its occurrence.

Laceration of the cervix or perineum may in rare instances cause hemorrhage during labor, though the pressure of the presenting part usually controls it till the second stage is completed. It may seriously interfere with the third stage, and I have lately had a case in which a lacerated cervix did so. The patient, a multipara, had been in labor three hours when I arrived, and owing, I suspect, to a malposition of the uterus, the cervix was torn to the vaginal junction on both sides, the head was in the hollow of the sacrum, and the anterior lip of the cervix was presenting at the vulva, wedged firmly against the pubes by the occiput, and intensely black and congested. Between the contractions, which were very strong, the bleeding from the ruptured *circular* artery was profuse; not alarmingly so, but sufficient to materially exhaust the patient if long continued. I at once applied the forceps and delivered, and, as the uterus contracted strongly and well, the bleeding soon ceased, though I feared sloughing of the anterior lips, which undoubtedly would have occurred had delivery been longer delayed. This hemorrhage is more difficult to control than that coming from rupture of the perineum, though that is apt to be more profuse when the *transversus perinei* artery is torn. This can easily be reached and ligated, or if the perineum is restored at once by silver sutures, as I think it should be, that will generally stop it.

In conclusion, I would say that while hemorrhage during labor is comparatively rare, its importance is not less than that of ante or post-partum, from the difficulties which surround it, while fœtus or placenta is still in utero, and we are deprived of the means so useful in managing it when we have an empty uterus to deal with.

THE PLACENTA AS A TAMPON.

BY J. H. H. BURGE, M.D.

Knowing that in this most interesting and important discussion I was to follow seven strong men who would be sure to present the subject in all its phases so thoroughly as to make mine a work of supererogation, I have selected only two thoughts for presentation. The first has reference to one cause of hemorrhage during labor, viz., placenta-prævia. A point of practical interest was illustrated by a case which I reported several years ago (N. Y. J. of Med., Dec., 1870). The hemorrhage being profuse in the intervals of pain, and ceasing almost entirely during the uterine contractions, I did that which might suggest itself to any one—grasped the fundus with both hands and pressed the fœtal head, which was the presenting part, strongly against the dilating os. This pressure I found it safe to remit when, and *only* when, the expulsive effort was strong. The device in this instance was perfectly successful—the mother and child both living, although the labor lasted nearly three hours. I have no idea that this method would be found available in any large percentage of cases; yet it seemed to me a duty to refer to it in this connection.

The other thought, which I will briefly express, has especial reference to hemorrhage after labor. I have so often seen the statement in the journals and heard it from the lips of practitioners, that the invariable rule of these writers and speakers was to remove instantly the separated placenta, that I have often, in conversation, called attention to one phase of the subject which I have nowhere met with in obstetric literature, viz., the value of the placenta as a *natural tampon.* It matters not that this practice is unsupported by any good authority; I am convinced from experience and observation that post-partum hemorrhage is oftener caused by hurrying the afterbirth than by anything else. All the excitement and anxiety, the worry and weariness of a tedious or difficult labor demoralize the attendants, so that fifteen minutes seem an hour. In quick succession are heard the questions: "Is all right?" "Why doesn't it come?" "Do you think it's grown fast, doctor?" etc., etc. The mother persists that it was never so long before; that Dr. Blank always took it away as soon as the child was born. Is it any wonder that the doctor gets a little impatient too? Now if there is no pain, and no obvious occasion for interference arises, I beg, for the woman's safety, that no traction on the cord, no searching for the placental edge, no officious meddling of any kind be indulged in. Let the patient be watched. See that the uterus be well contracted, and you may feel much surer that it will remain so, if you let the placenta alone. It will be soon enough to interfere when the first shock of labor is passed.

If the placenta is in the womb, its presence there is the best possible stimulus to contraction—better, in my opinion, than any one's hand, and if, from any degree of inertia, the womb is indisposed to contract, then the placenta (if detached) is the best possible tampon. If it has been extruded from the womb and lies in the cavity of the sacrum, even there its office is an important one, for its gentle pressure upon the relaxed os, and upon any bleeding vessels that may exist, is most salutary. Of course, in the case of a strong, healthy woman, in a perfectly natural labor, it may make no material difference how much the placenta is hurried in its exit; but the majority of those to whom we minister are not of this class. The one point which I wish to emphasize is this: that the placenta is the best and *only* tampon suited to the post-parturient condition; that after its complete separation before it leaves the uterus, or before it leaves the vagina, it possesses all the qualities of an unirritating, smooth, soft, and yet sufficiently firm barrier to the effusion of blood.

Extract it before the time, and you have lost an advantage which you cannot regain.

I do not advocate leaving the afterbirth entirely to the unaided efforts of nature; that course has been tried by careful observers, and abandoned. It is no part of my present purpose to discuss the general management of the placenta. I make no reference to complications and special emergencies. The case is natural—is ordinary; don't take the risk of making it unnatural—extraordinary—by pulling at the afterbirth before the nervous system of the newly-made mother has had time to rally its forces. Whether the time required for this be half an hour, an hour, or two hours, must be left to the individual judgment of the accoucheur. As a rule, do not be in a hurry.

POST-PARTUM HEMORRHAGE.

BY J. E. CLARK, M.D.

I endorse fully the remarks of Prof. Thomas on the pathology and treatment of hemorrhage after delivery. It seems to me physicians do not bear in mind the physiological method of arresting the bleeding. If so, they would not talk of tampons after delivery. We want no tampons—tampons are fatal. It is not long since an estimable lady lost her life in New York City by post-partum hemorrhage, attended by two eminent blockheads. They used the tampon and kept it there until she bled to death.

It should be borne in mind that the closing of orifices of the uterine sinuses *cannot* take place until the uterus is thoroughly emptied of its contents, whatever they may be. The bleeding *will* not *stop* until it is, unless the heart stops beating. Syncope may arrest it temporarily, but it will begin again as soon as the heart resumes its work. Therefore, I must totally disagree with my estimable friend who precedes me when he speaks of leaving the placenta in the uterus to serve as a tampon. I believe the placenta should be removed as quickly as a contraction can be obtained, and often the attempt to remove it by reflex action brings contraction.

There is one element in the treatment not mentioned this evening which I consider very important. I mean position of patient. I think the elevation of the foot of the bed to the height of twelve inches or more is of very great advantage; reasons are obvious. In all cases of delivery I am in the habit of requiring the patient to lie without a pillow for from two to six hours, and also enjoin absolute quiet.

The practice of using ergot indiscriminately after every delivery I disapprove entirely. It causes much unnecessary suffering, and in most cases is like applying the whip to a willing horse. I never use the whip on my horse. I would not have one that needed it. I believe there is not one womb in five hundred that needs the spur of ergot, or spurred rye, when treated on common-sense principles.

The only case of hemorrhage after delivery that has occurred in my practice in a number of years is the following:

Mrs. S., 42 years old, first confinement. Was taken in labor night of Nov. 26, 1878; saw her next morning. Labor tedious, completed about four P. M. with forceps; some laceration of perineum; left her about five P. M., with good contraction, comfortable; enjoined perfect quiet and to keep the head low. Was sent for in great haste about half-past six; went immediately; found her pulseless and propped and held up in bed to prevent her from dying. Ascertained that shortly after I left the nurse had changed all her clothing and placed two pillows under her head to make her comfortable. I immediately laid her flat in bed, injected half a drachm fl. ext. ergot and two or three syringefuls of brandy and raised the foot of the bed about one foot; and also sent for Dr. Mitchell in consultation. When the Dr. arrived there had been no more hemorrhage and the pulse was returning at the wrist. He only suggested two more encyclopædias under the foot of the bed.

She subsequently made a good recovery.

TREATMENT OF PUERPERAL HEMORRHAGE.*

BY DR. T. GAILLARD THOMAS, OF NEW YORK.

Mr. President and Gentlemen: I am exceedingly happy to have the opportunity of meeting the Kings County Medical Society this evening. The Proceedings of this Society have often come under my notice, and I have always read them with so much pleasure that I am glad to meet you and assist in the discussion of the paper which we have just heard and which opens up a subject of very great interest and importance.

It ill becomes one, and especially a guest, to begin with criticism, and yet I propose to commence in that way. I wish to say a word with regard to the amount of material offered for discussion this evening. I think it is simply prodigious. In the program your Society resembles the prolix clergyman who said that he should take for his text the first five chapters of the Book of Mark. When I read what was to be touched upon and what I was expected to say, I thought that I should be obliged to remain in Brooklyn for at least a week, and that you were going into what our religious friends call a protracted meeting. Certainly no one can reasonably doubt that either of the subjects, hemorrhage before labor, hemorrhage during labor, and hemorrhage after labor, is more than can be properly managed in one evening, and it is next to impossible to do justice to any one of them in the short time which I shall feel at liberty to occupy.

Now, a few words concerning the paper to which we have just listened. It is exceedingly concise, and Dr. Stuart has gone so completely over the subject that I shall be obliged to repeat, to a certain extent, his ideas in what I shall have to say.

I hardly know how to group these varieties of hemorrhage, for there are many differences between them, but the only way in which, as it seems to me, they can be grouped is to touch upon the general features which they have in common.

I suppose we all agree that the pathology of post-partum hemorrhage is this: that those influences by which nature ordinarily seals the large sinuses of the uterus, which pass through the uterine wall and enter the placenta, fail to act; and that those influences which ordinarily prevent hemorrhage from taking place in every case of labor are these and no others.

In the first place, every one of these sinuses is surrounded by uterine muscular fibres, circular and longitudinal, which contract and ligate the vessels so that, to a certain extent, each vessel is closed by uterine contraction. This influence resembles the ligature which our old teacher, Ambrose Parè, taught to apply to the mouths of bleeding vessels. But there is another influence, and that is coagulation of blood in the mouths of bleeding vessels; the formation of thrombi which hang into the uterus, and which are the cause of after-pains in multiparous women, because they act as a foreign body in the cavity, and irritate the organ into contraction.

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* This paper should have followed Dr. Stuart's Introductory.

I presume no one will doubt that these are the influences, and the only ones, which ever prevent uterine hemorrhage; and it seems to me that upon the mind of the student the fact should be so firmly fixed that he can never forget it, *that there are no other* influences which prevent uterine hemorrhage.

But in ante-partum hemorrhage—that hemorrhage which occurs before labor and also that which takes place as acccidental—unavoidable hemorrhage when labor comes on—another influence is brought to bear which does not exist in post-partum hemorrhage, namely, pressure and counter-pressure; pressure of the bleeding placenta and the bleeding wall of the uterus directly against the resisting body of the child. So in ante-partum hemorrhage there are three influences which act in arresting the flow of blood:

1. The contraction of uterine fibre causing constriction of blood-vessels.
2. The formation of thrombi; and
3. Pressure of bleeding points directly against the resisting body of the child.

In post-partum hemorrhage there are only two influences acting:

1. Constriction of blood-vessels by uterine fibre; and
2. Coagulation of blood.

This being the case, we have, in the study of the etiology and treatment of this complication, to keep these points clearly and distinctly before our minds.

Just here I must say—and I hope I have not arrived at the time in life when I have become *laudator temporis acti*—I believe that we have not advanced very much from olden time. So many individual remedies have been brought forward that the student is entirely dazed when he comes to the scene of action. The number of remedies dances through his mind, and he loses sight of the pathology and of the land-marks which should guide him. Doctor so-and-so injects hot water; doctor so-and-so injects a solution of persulphate of iron; doctor so-and-so compresses the aorta; and he loses sight of the real condition which he meets.

Some twenty years ago I had this fact impressed upon my mind in a way which I shall never forget. I had just given a lecture in the University of the City of New York, on uterine hemorrhage, and among the remedies mentioned I spoke somewhat forcibly of compression of the aorta, which at that time was upon the crest of the wave. In the night of the same day two of my students, who were attending a case of labor, sent for me in great haste to come and see a woman who was bleeding profusely. I responded at once, and when I arrived I found a woman almost completely exsanguinated, gasping for breath, the floor covered with blood, and the students, leaving the flaccid uterus, which had risen nearly to the ensiform cartilage, were standing by the bedside with their thumbs deeply buried in the abdominal walls, endeavoring to compress the aorta. I said to myself, I laid too much stress on compression of the aorta as a means of checking uterine hemorrhage.

The point which I wish to make is this: I believe so much has been written upon this subject that even men of large experience are often seized with hesitation concerning the common-sense line of practice which dictates itself, and by which they should be guided at the bedside.

Now, with regard to the etiology of this condition. As Dr. Stuart has hinted in his paper, hemorrhage which occurs after delivery is commonly due to hasty action on the part of the obstetrician, effecting rapid delivery. I think that a good obstetrician will have, in his own practice, but very little experience in post-partum hemorrhage, and for the reason that well-managed cases of labor will rarely be attended with this complication. It occurs much more frequently in cases managed by men who do not watch the uterus, who do not allow nature to deliver the child, who do not superintend the third stage of labor, and who do not fix in their minds the fact that the third stage of labor consists, not in the delivery of the placenta, but in *persistent uterine contraction.* The man who has this fact imperfectly fixed in his mind will often have to deal with uterine hemorrhage; while the man who feels it to be his duty to turn his entire attention, not to the dressing of the navel or arranging the bed or the patient, but to seeing that the third stage of labor—persistent uterine contraction—is thoroughly completed, will have only a slight experience in this direction.

But this remark does not apply to ante-partum hemorrhage; for when the placenta is so located that it is torn off, hemorrhage is inevitable, and no man or method of cure can prevent it from occurring. With regard to prognosis, I think, as a rule, it depends very much more upon the physician in charge than upon the disease which he is called to treat. I think that a case of puerperal hemorrhage, well managed from the beginning, whether ante-partum or post-partum, will generally end well.

There are many cases, such as mentioned by Dr. Stuart, in which women will die from the loss of a very small quantity of blood. There are women who have the hemorrhagic diathesis, and who will die despite everything which can be done, for they would die from bleeding of the gums, from epistaxis, or have fatal bleeding sweat; but such cases are only very rarely seen, and are altogether exceptional.

The rule, I think, is this: that a case of puerperal hemorrhage, whether ante-partum or post-partum, if managed carefully and thoroughly in the beginning, will almost invariably recover.

Now, with regard to treatment. Time will allow of only a superficial review of this part of our subject, and I shall, therefore, deal almost entirely with leading principles, and avoid speaking of details.

Dr. Stuart made the remark that if we would look upon uterine hemorrhage as subject to the same general principles of treatment as other hemorrhages were, the question would become a very simple one. Upon that point I agree with him entirely, and I think that is just what we all should do. To go back to the pathology of our subject, let us suppose that we have to deal with hemorrhage from any part of the surface of the body. By way of illustration, I will take one of the most difficult parts in which we are called upon to treat hemorrhage, namely, a deep incised wound of the palmar arch. What are the principles upon which hemorrhage is controlled in that region? The first old woman who sees the bleeding would put into the wound something, such as cobweb, shavings of leather, pieces of lint or cloth, which would clot the blood, and when the surgeon arrives he usually finds that the hemorrhage has been controlled; for the old hussey has favored the formation of a clot which naturally seals the bleeding vessels. Now, this is one of the methods by which nature checks the hemorrhage. The surgeon, however, when he comes, ligates the divided blood-vessels, and so does the uterus, by its contraction, ligate the open vessels; and so does the obstetrician, who meets these cases intelligently, ligate each vessel, and he does so by forcing the uterus to contract in response to the treatment which he adopts.

But suppose all the divided vessels in the palm of the hand cannot be ligated; one, two, or three are secured, but still oozing of blood goes on. It is said by surgeons that one of the best methods of procedure under such circumstances is to place a billiard-ball, or some similarly-shaped hard body, in the palm, and strap it there firmly by means of a bandage. Although you do not see the vessels which are open, you control the hemorrhage by making pressure and counter-pressure in their immediate neighborhood.

Gentlemen, every one of these principles is applicable in the treatment of uterine hemorrhage. Let us begin with the treatment of hemorrhage occurring in a woman whose labor has not begun. This woman has a child or children and liquor amnii in her uterus, the os of which is undilated, and she is bleeding. The first remedy which should be adopted in such a case, unless the hemorrhage is furious, which it is not usually, is the tampon. The tampon is a perfectly safe remedy while the uterus is filled with a child and liquor amnii. Of course there is such a thing as internal hemorrhage, but if the uterus be watched and brought into firm tonic contraction, such a hemorrhage is impossible. How do we stop the hemorrhage with the tampon? It is by causing coagulation in the blood-vessels of the uterus and the placenta. Just here I will say that I disagree with Dr. Stuart concerning the occurrence of hemorrhage from the placenta; for, through a speculum, I have seen the blood distinctly oozing from that organ. The tampon does that; but the obstetrician must not put in a tampon and go away, for internal hemorrhage may take place, which will kill the woman. But by watching the uterus, and keeping it in firm contraction, the tampon can be used with perfect safety: and in fifteen out of twenty such cases the tampon will be all that will be necessary.

When I speak of the tamponing, however, I do not mean that painful and inefficient measure known to our grandfathers, which consisted in stuffing a silk handkerchief into the vagina, or in using the kite-tail structure which accomplished nothing towards obtaining the desired result, but I mean the tamponing which is secured by placing the woman upon her left side with one arm thrown behind her, and, with a Sims's speculum or the two fingers of an assistant, lifting the perineum and depressing the anterior wall of the vagina, removing all blood from the vagina, and then taking balls of wet cotton, not containing any astringent whatever, and stuffing them all around the cervix so as to make a collar, and then thoroughly filling the entire vagina with this wet cotton. You will then prevent distension of the uterus with blood by having it kneaded, and adopting other means ordinarily employed to secure tonic uterine contraction.

But suppose the hemorrhage goes on, and, despite your efforts, the uterus is becoming distended? Suppose the method you have adopted is a failure? you will then sweep away the cotton from the vagina, pass the uterine sound into the os, plunge it into the bag of waters, allow the liquor amnii to escape, and then you will have a billiard ball in the form of the body of a child, pressing against the placenta. Then irritate the uterus by external pressure and kneading, administer ergot or ergotine hypodermically, and you will cause it to drive the body of the child against the bleeding placenta, and, in most cases, check the hemorrhage at once. But suppose these two operations are both failures, the woman has become pallid, perhaps is rapidly sinking away, what then? Empty that uterus at once; tie its blood-vessels, just as you would cut open these tissues, get at the bleeding vessel, and secure it at all hazards. Now you will open the mouth by means of Barnes' dilators—do it rapidly—accomplish complete dilatation by means of the hand folded into a cone, open the fingers and spread the tissues out, pass the hand safely into the uterus, draw out the child, remove the placenta, and instantly ligatures are applied to the mouths of the bleeding vessels, and hemorrhage ceases in most cases. But the question may be asked: Is that all there is of the treatment of ante-partum hemorrhage? I will answer, absolutely, all that is of any value. You might inject hot water, but, *cui bono?* I think you are wasting time by resorting to other measures, and, besides, they are not applicable when the child's body is within the uterus.

Now, what is the treatment for hemorrhage occurring—the placenta being separated—as labor is progressing? The woman is in labor and she gets up, walks across the room and strikes against the table, and immediately begins to bleed; what shall be done? The plan of treatment is identical with that just described. Tampon the vagina and let the labor go on; and if that does not answer, break the bag of waters; and if that fails, empty the uterus, remove the placenta and so ligate the vessels. But there is another kind of parturient hemorrhage which differs from this entirely. It is where the placenta is eccentrically placed. In that case not one of these principles can act. In the first place, the mouths of the vessels cannot be sealed with coagulated blood so as to arrest the hemorrhage permanently, for the reason that no sooner is one set of vessels closed than another is freshly opened, and unless something more is done, the woman dies in the first stage of labor. Consequently coagulation of blood and the formation of thrombi cannot be counted upon in placenta prævia.

How about pressure and counter-pressure? The child is clear above the placenta, and we cannot depend upon that, for the head is out of reach.

How about ligation of blood-vessels by means of uterine fibre? The cervix contracts very badly at best. Besides, nature wishes to have it open, consequently we are cut off from all three resources, and thus it is that hemorrhage with placenta prævia is the most difficult form to treat.

In placenta prævia all the forces of nature are prevented completely from coming into action. There are no thrombi, practically, in the mouths of the bleeding vessels; there is no constriction in the mouths of bleeding vessels; and there is no pressure and counter-pressure. Now, the first stage of labor with placenta prævia is one of danger, while in the second stage, when pressure and counter-pressure exists, the rules for its treatment are just as simple, if common-sense is followed, as are the rules which apply to the ante-partum period. In the first place, stop the flow of blood, make coagulation complete as rapidly as possible by means of the tampon. When the tampon is used in the proper manner, it not only favors rapid coagulation in the mouths of bleeding vessels, but it does something more—it makes direct pressure as you would do with a billiard-ball in the palm of the hand.

My plan is, when I wish to tampon a woman for placenta prævia, to take an ordinary piece of linen, make a conical bag, stuff it with carbolized cotton until it is quite hard, and sew up the base. I then turn the woman upon her left side, introduce a Sims's speculum, remove all the blood I can, and then push the apex of that cone into the uterus as far as I can make it go. It can do no harm. I then tampon around it, fill the vagina, and put on a strong T bandage, which keeps the compress against the cervix constantly, and when the uterus contracts it is forced upon this cone, and gradually three things are accomplished: *First*, coagulation of blood is favored; *second*, the cervix is dilated by the pressure of the elastic plug; and *third*, direct pressure is brought to bear upon the bleeding vessels.

Suppose the tampon is left in the vagina for three hours, and labor is going on all the time; the good it does is, that it allows the first stage of labor to be completed without the woman dying. When the first stage is accomplished, delivery can be effected at once.

Suppose the os has become fully dilated, or is completely dilatable; the hand can then be passed, and if the woman is still bleeding, the next thing to do is to empty the uterus at once, cause firm contraction to follow, and the case is usually at an end.

But let us suppose, despite the tampon, that the woman bleeds so much that, by the time the os is fully dilated, both mother and child will be dead. I think the thing to be done under such circumstances is to adopt Simpson's method—remove the placenta and leave the child to be delivered by nature. The labor may cease for a while, but in the meantime the woman is resting, you are giving nourishment and stimulants, perhaps bandaging her legs and applying tourniquets, in order to give the greatest possible supply of blood to her brain; and, finally, labor is revived and completed. The child you say will be dead; and so it would have been if delivered by version.

Now, gentlemen, I must apologize for taking up so much of your time; but really it is your fault, and not mine. But you will permit me to say, that I believe, if the general practitioner, who not infrequently loses sight of principles and becomes frightened when he meets a case of post-partum hemorrhage, will bear in mind the fact that he is to secure immediate ligation of bleeding vessels, his task will be comparatively simple. If he fails, he must try something else; and it seems to me that the great rule is this: Put your hand up to the fundus uteri; turn out everything—a second child, if there be one; the placenta, clots of blood, and then passing the pulps of the fingers rapidly over the walls, scraping the walls with them; and I believe if this is done thoroughly there are but few cases in which you will be obliged to inject iron, or hot water, or adopt any other measure for arresting the hemorrhage.

I have not met with but one case in which I have injected astringents into the uterus, and then the patient was nearly in *articulo mortis.*

The particular point which I wish to make is this: In ninety-nine out of one hundred cases of post-partum hemorrhage, seen before the woman's nervous system is entirely prostrated, if the hand is properly introduced to the fundus of the uterus, everything turned, and the walls of the organ irritated with the pulps of the fingers, firm uterine contraction will take place. I do not believe there is any remedy to be compared with it, any more than I believe there is any remedy in the treatment of malarial fever to be compared with quinine.

But let us suppose that in the one hundredth case it fails to accomplish this result. Then it is said there are other agents which stimulate the uterus more than the hand. I do not believe a word of it. I believe there are things which have stimulated the uterus to contraction where the hand has failed; but I also believe it was the hand of a man who has not used it properly.

With reference to the injection of a solution of iron, as recommended by Dr. Barnes, I reject the measure entirely and absolutely, except as a dernier ressort. Hot water may be injected to the fundus with perfect safety, or put there in a sponge, and it will be very likely to stimulate the uterus; but not nearly so well as the hand. How did Dr. Stuart's sponge effect the result which he mentioned? I do not believe that it was the hot water which it contained, but the sponge itself, which, as a foreign body, was brought in contact with lax fibres of the uterine wall, and stimulated them to contraction. Another substance which has been used is the tincture of iodine; and still another, which I regard as better than iodine, and which has been highly recommended by Dr. Penrose, of Philadelphia, is common vinegar. One advantage which vinegar possesses is, that it can be obtained in any house. It may be carried in upon an ordinary handkerchief, or bit of soft cloth, swept over the walls of the uterus, and two things are accomplished: 1. The introduction of a foreign body causes the uterine fibre to ligate the bleeding vessels; and 2. The vinegar probably has some influence in causing coagulation of blood. But I am not sure that it is not the hand even then which accomplishes the end desired.

In the hypodermic use of ergot we have a most valuable measure to aid us in securing uterine contraction. To give this remedy by the rectum is hardly practicable, and if administered by it the woman will almost certainly vomit at once; and besides, if it remains in the stomach I doubt if it is absorbed under such circumstances.

The hypodermic injection of 15, 20 or 30 drops of sulphuric ether stimulates the nervous system and in that way arouses the uterus to accomplish its work.

But there is one remedy which has been overlooked. In works on obstetrics it is scarcely mentioned; and it has received very little mention in periodical literature. It is the Faradic current applied directly to the uterine wall. I have employed it in only one case, but others have used it successfully, and in my case it was either a coincidence or an extraordinary result. Almost everything had been used except Dr. Barnes' method, and without permanent result; but when I took one flat sponge electrode and carried it into the uterine, and placed the other upon the nape of the patient's neck, and allowed a strong current to pass, firm uterine contraction immediately ensued, which seemed to save the woman's life. Although this is but a single case, I think the remedy is worthy of a fair trial. The question arises, Why has it not been tried before? Chiefly because a battery was not at hand and could not be obtained, and when obtained, as a rule, it would not work, never under any circumstances. But those days have passed. Nearly every physician has a battery now; and a good battery can be obtained much more readily anywhere than good ergot, except in Brooklyn.

Now, in conclusion, Mr. President, I will say that in the treatment of post-partum hemorrhage the rule should be this:

If the hemorrhage is slight, and for good reasons you do not wish to pass the hand into the uterine cavity, try the hypodermic use of ergot; apply excessive cold or excessive heat to the fundus, force the uterus into firm contraction under your hand, and never let go of it until the woman stops bleeding. How long shall you hold the uterus? I have repeatedly held it, under such circumstances, for 12 hours.

But suppose it fails and the hemorrhage continues. Then wash the hand and arm thoroughly with soap and water, use a nail brush thoroughly, dip the hand and arm in warm, strong, carbolized water, and, without wiping them, carry the hand up to the fundus uteri, sweep everything out, and keep the hand there until the uterus contracts. Pass the pulp of the fingers up and down the sides of the uterus in any direction, and at the same time make counter-pressure from the outside with the other hand upon the wall of the abdomen.

If you fail with this, what next? It is a bad case, and you may resort to anything which produces a decided shock to the nervous system; give hypodermic of ergot, brandy and ether hypodermically, and, lastly, give a fair trial to the Faradic current.

VITAL STATISTICS FOR 1880—BROOKLYN.

BY R. M. WYCKOFF, M.D.

The deaths actually occurring in Brooklyn during the year 1880, numbered 13,222, being an increase of 1,653 deaths, as compared with the preceding year. The total number of births reported, 11,975; of still-births, 883; and of marriages, 3,814. Of these three classes last named, the returns are not complete, whereas the deaths are fully reported. The preliminary report of the census of 1880, made by the general government in the month of June, shows the population to have been 566,689; on this, as a basis, we find that the average annual death-rate amounted to 23.33 per 1,000 persons living. As will be seen by examining the table below given, there has been a continuous increase in the rate of mortality since the year 1878, in which year the rate touched the lowest point since the vital statistics of the city began to be fully registered. A comparison of the total mortality during recent years, the rates proportioned to population, and the populations by the last two census enumerations and for the intervening years, estimated as having increased annually at the rate of .0327 per cent., may be instituted by means of the following table:

Years.	Deaths by all Causes.	Differences.	Population per Census or Est.	Death-Rate for 1,000.
1880..................	13,222	1,653	566,689 C.	23.33
1879	11,569	494	548,500 E.	21.09
1878..................	11,075	287	531,100 E.	20.85
1877..................	11,362	972	514,300 E.	22.09
1876..................	12,334	136	489,300 E.	25.20
1875..................	12,470	....	482,493 C.	25.84
Average of 10 years . ..	11,691	....	488,238 E.	23.94

The death-rates above given are higher for the years 1876, 1877, 1878 and 1879 than those published in this issue last year, for the reason that the census last taken shows that the estimates of population had been made upon too high a percentage of increase, namely, the percentage of growth from the State census in 1870 to that of 1875, or about .04 annually. It may be stated that, as a general rule, the ratio of growth is always found to be greater by the census made by the State than that declared by the United States decennial census.

After a long immunity from small-pox, there occurred two deaths by that disease in the latter part of the year. There were no deaths by yellow fever within the city limits. Diphtheria caused 1,118 deaths, an increase of 429 over the total by that cause in 1879. Scarlet fever, 222 deaths, a falling off, as compared with 1879, of 122. The number of deaths by certain other principal diseases was: by measles, 156; whooping-cough, 111; croup, 420; typhoid fever, 71; cholera infantum, 975; diarrheal diseases, all ages, 1,602; diarrheal diseases, under five years of age, 1,407; malarial fevers, 256; cerebro-spinal fever, 3; erysipelas, 75; intemperance and delirium tremens, 65; rheumatism, 75; cancer, 221; marasmus, 414; consumption, 1736; hodrocephalus and tubercular meningitis, 185; meningitis, 336; apoplexy, 288; convulsions, 247; sunstroke, 36; all diseases of the nervous system, 1,426; diseases affecting the heart, 497; bronchitis, 495; pneumonia, 972; all diseases of the respiratory system, 1,670; Bright's disease, 268; puerperal diseases, 92; old age, 271; infantile asthenia and premature birth, 278; suicide, 31; in public institutions, 705; the number of inquest cases was 1,075.

By the five principal classes of causes of death the number of decedents was: I. Zymotic class, 4,310. II. Constitutional class, 2,719. III. Local class, 4,718. IV. Developmental class, 1,055. V. By violence, 420. By seasons, the record was: for the first quarter, 2,682; second, 3,046; third and fourth, 7,494. By sexes: males, 6,687; females, 6,535. By nativity: born in the United States, 9,515; foreign born, 3,707. By age periods: under one year of age, 3,343; under five years of age, 6,215; from five years to ten, 797; ten years to twenty, 505; twenty to forty, 1,994; forty to sixty, 1,879; and at sixty years and upwards, 1,832. By social condition: married, 3,261; single, 8,566; widows, 989; widowers, 356; not known, 50. Of the deaths by suicide, 25 were males and 6 females: all were white, 21 were married, 6 single, 1 widow, and 2 widowers, 1 not known, 9 native born, 22 foreign born.

THE MEDICAL SOCIETY OF THE COUNTY OF KINGS.

The stated meeting of this Society for June was held on the 21st of that month, the President, Dr. C. Jewett, in the chair, and about 100 members present.

The minutes of the last meeting were read and approved.

The following nominations to membership were presented: Dr. C. A. Fortun, by Dr. Hutchison; Dr. H. W. Barnard, 384 Jay Street, by Dr. A. S. Clarke; Dr. A. H. P. Leuf, 194 Wyckoff Street, by Dr. Hunt; Dr. C. D. Beasley, 535 Bedford Avenue, by Dr. Fowler; Dr. J. E. March, 108 Washington Avenue, by the Secretary.

THE COUNCIL reported the acceptance to membership of: F. Fuller, M.D., Harvard University, 1879; Edw. H. Squibb. M.D., College Physicians and Surgeons, New York, 1881; H. Plympton, M.D,, Long Island College Hospital, 1880.

Later in the evening, the President declared the election of Drs. Josephine A. Dupré, Edward Grether, and E. H. Bartley.

The President stated that he had appointed Dr. L. C. Gray Chairman of the Medico-Legal Committee.

The scientific business of the evening was opened by a report by Dr. F. A. Stuart, Chairman of the Committee on Obstetrics. He was followed by Dr. T. Gaillard Thomas, of New York, the guest of the evening. His remarks were made *ex tempore*. The short-hand report thereof was made by Dr. W. M. Carpenter, of New York, who was present on behalf of Dr. Wells. The discussion proceeded, according to pre-arrangement by the Committee, in the form of written papers, by Dr. W. Wallace, Dr. A. S. Clarke, Dr. J. R. Vanderveer, Dr. W. Gilfillan, Dr. J. H. H. Burge, Dr. A. J. C. Skene, Dr. J. E. Clark, and Dr. J. J. Lamadrid.

On motion of Dr. Stuart, a vote of thanks was cordially tendered to Dr. Thomas. At a late hour the Society adjourned, after an announcement by the chair that the subject of the treatment of Diphtheria would come before the July meeting.

’Ασκληπιὸς *‘ο Σωτὴρ*

Χαρμα μέγ’ ανθρωποισι, κακων θελκτῆρ’ οδυναων.

Hymns of Homer, No. XVI.

PROLIFERATIONS.

——THE LIBRARY COMMITTEE have issued their Second Annual Circular, and have already begun their visitations. While not inclined to refuse large contributions, they hope to receive a little from each physician, as the Library is open to all for reference. The gifts of last year were well-nigh universal, and the Committee hope that their personal appeals this year may result in an aggregate not inferior to their previous work. The more prompt the response, the less will the Committee regret having undertaken the never pleasant duty of soliciting.

——DR. T. G. THOMAS'S PAPER should have been printed immediately following Dr. Stuart's introductory, but the stenographer's report could not be received in time to insert it in its proper place. In classical construction the prominent word is emphasized by being placed at the end of the sentence.

——THE MEDICAL REGISTER for 1881–2 appeared, in good season, on the 11th of June, under the editorial charge of Dr. William T. White. A few changes only have been made, so that the general appearance of the book is the same as that of the recent annual issues. Dr. White merits the thanks of the medical profession for the painstaking and incessant labor given by him to sustain this indispensable work, and we bespeak for this year's Register a more liberal support than has yet been had. For sale by F. B. O'Connor, 68 and 70 Court St.

——THE PRINCIPLES OF MYODYNAMICS, BY DR. J. S. WIGHT, just issued, is unique in medical literature. This profusely illustrated volume is a mathematical study of the forces of muscles and the effects of these forces, with special studies on the application of those forces to individual muscles and groups of muscles, and designed to furnish a rigidly scientific basis of treatment in fractures, dislocations, and orthopædic surgery. For sale by F. B. O'Conner, 68 and 70 Court St.

——DR. J. C HUTCHISON has received the degree of LL. D. from the University of Missouri.

——DR. S. SHERWELL has been elected President of the Dermatological Society of New York.

——ECONOMICS in the Dietary will be aided by perusal of the recent pamphlet of 31 pages on "How we made a Nine-cent Dinner," from the New Century Cooking School in Philadelphia. Price 10 cents. Address 1112 Girard Street.

——AN OFFICIAL LIST of the Physicians in the County, registered under the Act is published on pp. 158 to 162.

——THE REGULAR MONTHLY MEETINGS of the Medical Society of the County of Kings are held at 8 P. M. on the third Tuesday of each month, at Everett Hall, 398 Fulton Street.

The July meeting will be held on the 19th, at which the following papers will be presented:

Mercurial Fumigations in Diphtheria and Croup, by Dr. J. Corbin.

Use of Pilocarpine in Diphtheria and Croup, by Dr. H. F. Williams.

Members are requested to offer, in writing, their experience with these methods.

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Chap. XI., Art. 2, of By-laws: "Any Member elected as Delegate to the Medical Society of the State of New York, who shall be unable to act as Delegate during two successive years, shall be considered to have vacated his position as Delegate."

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PROCEEDINGS

OF THE

MEDICAL SOCIETY OF THE COUNTY OF KINGS.

VOL. VI. AUGUST, 1881. No. 6.

MERCURIAL FUMIGATIONS IN DIPHTHERIA.

BY J. CORBIN, M.D.

"Laryngeal diphtheria proves fatal in almost every case, unless tracheotomy be performed." Such is the language of Dr. Jacobi, and I will further add that it too frequently proves fatal where it is performed.

Inasmuch as my paper this evening has reference only to this form of diphtheria, I trust I may be pardoned if, in introducing this subject, I begin first with the individual cases as they have occurred in my practice. In the month of November, 1874, I was called to attend a child, three years of age, with diphtheria, in a family where an older child had just died of this disease. Under the usual treatment of iron and quinine this patient seemed to be doing well until the fifth day, when the hoarse and stridulous cough and aphonia reminded me what I must expect, namely, a fatal result.

Without loss of time I began, in this case, the use of the black oxide of mercury in the form of fumigations, using a half drachm every two hours, and keeping the patient under an improvised tent for the space of fifteen minutes. No other treatment was used, except stimulants and a nutritious diet. On the third day this child expectorated a piece of membrane nearly four inches in length, so that it is fair to conclude that in this case the disease involved the larynx and also the trachea to a considerable extent. From the time of the commencement of the aphonia to the restoration of the voice, it was exactly twenty-one days.

The above is a brief history of the first case of diphtheria which I treated by mercurial fumigations. I will here say that I have since had frequent opportunities of using this particular form of treatment, but I was not satisfied whether my case resulted favorably from accident or medication, as we have reports of favorable results from all sorts of treatment; but lately having saved three other children in succession, I have to acknowledge that my skepticism is very much shaken, if not removed.

On the 25th of April last, a child, five years of age, was attacked with diphtheria for the second time—the first attack occurring last November. The membrane was confined to the tonsils. The case progressed favorably until the third day, when aphonia and stridulous breathing occurred. I found this condition on my morning visit, though nothing of the kind was present the evening before. In this case I used the mild chloride—a half drachm every two hours, as the case was very urgent. Drs. Jewett and Hunt were called in consultation, and concluded that tracheotomy should be performed, which was accordingly done by Dr. Jewett at ten P. M. This child had received only four fumigations, and had I felt confident of that plan of treatment, and that my patient would have lived till morning, I believe that in this case tracheotomy would not have been required. The case, however, progressed favorably, without further retention of membrane, and made a good recovery.

A second case occurred in the same family at this time—a child three years of age. On the fourth day of the disease the same symptoms were present as in the preceding case. I placed the child in a crib, covering it with a woolen blanket, and began the fumigations, using, as in the preceding case, the mild chloride. I persistently kept it up for one day, when it no longer became necessary. The breathing was relieved, and the child expectorated for a number of days a material which I should judge to have been broken-down membrane. This child is now entirely well. My fourth case is of more recent date, and was more obstinate to control. I used in this case nine drachms of calomel. The child was a girl, eight years of age, where I had the same conditions present as in the preceding ones. The result was a good recovery. Such is a brief outline of the history of four cases of laryngeal diphtheria, which I have treated by mercurial fumigations. I would say that they were all of a sthenic type, and I would confine this method of treatment to this particular class. I believe it to be an efficient curative agent. In every case the tonsils only were covered with membrane, excepting one where the membrane extended to one side of the uvula. In this child the glands of one side of the neck were considerably swollen, but there appeared to be no blood poisoning present. When we take into consideration the mortality of this form of diphtheria, I think we are justified in adopting almost any plan of treatment which will save life. I have seen no unpleasant results in any of the above cases. There has been no salivation in any one of them. There has been no diarrhea produced, as there must have been if the medicine had been given by the mouth, which, of course, would have been impossible. In no case was there any particularly marked symptoms of depression or exhaustion. I did not continue the fumigations in any case longer than was necessary to control the disease. A few words in regard to the manner of vaporizing the mercury. I have used in three cases calomel and in one the black oxide. I would prefer the former. The fumes of it are not unpleasant or suffocating. It is always easy, in almost any house, to improvise a tent or a substitute for one. A cane-seated rocking-chair for larger children, and a crib for smaller ones, will answer every purpose. Over these a woolen blanket can be spread and removed as required. Under the chair or in the crib a tin alcohol lamp, with three arms to support a piece of tin; on the tin is placed the calomel, when only a moderate heat will almost entirely volatilize it. This arrangement does not demand a great amount of intelligence on the part of the mother or nurse to see that the physician's orders are faithfully executed.

I trust that if any of the gentlemen present should decide to adopt this method of treatment in this particular form of disease, that they will begin when it is not too late. It has served me well in the above cases, and my apology for presenting them to you this evening is that I can find no record of this plan of treatment; and if this simple method will be the means of saving life where we usually expect a fatal result, it ought to be publicly known. In my opinion, the action of mercury, administered by fumigations, is founded upon a reasonably philosophical process. It occurs to me that it strikes at the root of the evil, that it destroys that element in the blood upon which the plastic condition of the membrane depends, and that, having destroyed this, the membrane dies and is soon thrown off. In no other way can it be introduced in a sufficiently rapid manner to control laryngeal diphtheria than by fumigation, without producing deleterious or exhausting results.

PILOCARPINE MURIATE IN DIPHTHERIA.

BY H. F. WILLIAMS, M.D.

The first article that attracted our attention to the use of this agent in diphtheria, was in the *American Journal of Medical Sciences* of April of this year, giving the prescription of Dr. Geo. Guttman, of Cronstadt. The reports of cases, in numerous journals, since that time, show that his directions have been generally followed; he, however, did not confine his observations to diphtheria alone, but to other acute throat affections and some forms of bronchial catarrh.

Dr. Bartholow, in speaking of its specific effects, states that it may prove beneficial in diphtheria and allied conditions.

My experience with pilocarpine previous to May of this year was confined to a single case, and that of uræmic coma, in which, by two hypodermic injections, I produced a profuse salivation and bronchorrhœa. The disengorgement of the pharyngo-laryngo-tracheal tract, combined with the hypersecretion of the salivary glands during unconsciousness, became troublesome, because it was almost impossible to maintain the patient in a position that would allow the fluid to pass out of the mouth, and because the patient could make no voluntary forcible expiratory effort. The diaphoretic effect sought was not produced.

Dr. Geo. K. Smith, by the use of the electric current, properly applied to the infiltrated tissues about the throat, has succeeded in producing therapeutic results so similar to those produced by pilocarpine, that the claim of its advocates is strengthened. It will be gratifying to know that Dr. Smith will favor us with his experience with electricity, explaining its immediate and permanent effects.

Dr. Chapman read a paper before this Society some years since, in which he showed the necessity of early adopting a systematic stimulating course of treatment in diphtheria. Several practitioners, while conceding the truth of the argument, did not regard it as anything that their experience did not furnish, while others claimed for it originality both in proving the remarkable tolerance of the patient for large quantities of alcohol and its apparent specific antagonism to the diphtheritic germ. Certain it is the stimulating plan of treatment is generally followed, and any departure from it in this city (undoubtedly from the above reasons) meets with considerable opposition.

Pilocarpine is a departure from the stimulating plan of treatment, inasmuch as all observers admit that its continued administration depresses the heart; but it has not yet been shown that there is any tonic property in pilocarpine that will class it with aconite, veratrum, and other less prominent depressants. This depressing the heart seems to be the result of over-exerting it, for no one has yet reported a case in which a large dose paralyzed the heart's action. True, we can probably take enough to destroy life, but it is equally true of most any simple agent. This secondary weakness of the heart Dr. Guttman seeks to obviate by advising a diffusible stimulant after each dose. So for every prod of the spur he gives a pint of oats.

Whatever may be the explanation, most of the current reports speak in pretty warm praise of its action. Dr. Jacobi discouraged its use, as reported in the transactions of the American Medical Association. He, however, based his opinion upon theory rather than upon an extended practical experience.

The following is Dr. Guttman's formula, which I have used in the ten cases that form the subject of this paper:

R. Pilocarpine mur........gr. ⅓—⅔.
Pepsine...............gr. 1—1¼.
Acidi hydrochlo........gtt. iii.
Aq. dist...............℥ii ss.
S. A teaspoonful hourly for children.

He gives another prescription for adults, but this answers every purpose, as it will be found necessary to vary the size or frequency of the dose in every case.

A stimulant in some form was given after every dose, though sherry wine, as he directs, is not always well borne.

The ten cases comprise five of diphtheria, three of scarlet fever, with severe throat complication, one of quinsy sore throat, and one of follicular tonsilitis.

FIRST CASE.—A little girl, eight years of age, who for twenty-four hours I treated with stimulants and a powder composed of equal parts of guaiacum cubebs, chlorate of potassium, and chloral, applied to the throat. The membrane, glairy and firm, formed rapidly, the bases of the tonsils became infiltrated, and the case seemed as unpromising as many under my care that have terminated fatally. When the pilocarpine was commenced, the aunt's account on the following morning was so much the unconscious truth that I repeat her salutation to me. "Of all the sights I ever saw, this beats them all. She liked to died. She drenched the pillows through and through, but she is a great deal better now; she can talk and swallow nicely." It was evident that something extraordinary had happened, but no indication of immediate death. The child was sitting in bed rather demurely, as if wondering whether this peculiar process was to be repeated. Examination of the throat showed a furrow or sulcus between the membrane and healthy tissue. The membrane appeared loosened, washed, and corners semi-detached. The pulse continued rapid, and a little weak. Temp. reduced. At subsequent visits pieces of membrane were easily removed, the whole disappearing in five days. Under tonic treatment the child made a good recovery.

Second Case.—A little girl three and one-half years of age with diphtheria. This case would have recovered under any judicious treatment. The pilocarpine was given, producing salivation.

Third Case.—An adult, with an aggravated quinsy sore throat. Two teaspoonfuls of the mixture were given hourly, producing copious salivation and sweating, and rapid relief, patient comparing this with previous attacks with great compliments to this agent.

Fourth Case.—A boy five years of age, with scarlet fever, in which the throat complication was early. On the second day the tonsils were swollen to such an extent that the halves of a medium sized orange, applied to either side, would nearly indicate the deformity produced.

The pilocarpine was given at about three P. M. of the second day. The mother gave the doses faithfully every hour until the arrival of the father, at about seven, when, through anxiety and fatigue, she was seized with a painful illness that prevented her from explaining the directions I had been so particular in giving. He at once observed the condition of the child, supposing it to be vomiting, and regarding this as an unfavorable symptom, immediately telegraphed me.

Arriving without loss of time, I found the little fellow behaving manfully, ejecting the rapidly accumulating secretion from his mouth with ease and with apparent relish.

The pillow on which he had been lying was wet through, the mother having carefully placed the head so that the saliva ran from the mouth without obstruction while asleep.

The most interesting point in this case is the fact that the tumefied and infiltrated condition of the throat, observed four hours before, was so far reduced that no deformity existed externally. The child did not appear to be exhausted. The following days were those of slight discomfort, produced by a mild run of the fever. No membrane formed in the throat, and the case gave no further anxiety.

Fifth Case.—An adult, with scarlet fever, and is interesting, in so far as I was able to collect the quantity of secretion ejected from the mouth during twelve hours. The pilocarpine was given at eight P. M. The appearance of the throat was erysipelatous, dry, and exceedingly painful—patient could talk with great difficulty. After the fourth dose defloration commenced, and by ten the following morning the patient had collected, in a convenient basin, over a pint of saliva, mucus and mucopus. This patient was an aunt of the child with diphtheria first reported, and was nursed by the same person, who, becoming familiar with the action of pilocarpine, assured me there was no vomited material in this amount. The fauces were covered with a loose wheyey substance resembling a mucous surface touched with nitrate of silver and neutralized by a salt solution. The throat was much less swollen; could talk without pain, though somewhat thickly. This case proved serious, though the throat gave little trouble, requiring an occasional resort to the pilocarpine.

The patient is now slowly recovering from nephritis, following the attack.

Sixth Case.—A boy five years of age, with follicular tonsilitis, both tonsils well covered. Pilocarpine given at 10 A. M. The following morning found tonsils reduced and follicular points reduced to one—as quick a result as I ever obtained in this simple affection.

Seventh and Eighth Cases.—Brother and sister, seven and five years of age. Both took pilocarpine, causing copious salivation and rapid decline of symptoms and early recovery of each.

Ninth Case.—A boy three and one-half years of age with scarlet fever, in which the pilocarpine acted better than did I in prescribing it. To be brief as possible—on the first visit, found the child semi-conscious, tossing about the bed. Temp., 105; pulse, 128; had been vomiting; constipated. Prescribed a smart dose of castor oil and a febrifuge of tinct. aconite and liq. ammonia acetatis cold to head. In the evening of same day, Dr. A. S. Houghton, who saw the case for me, suspended the aconite and substituted bromide of potassium and veratrum viride to quiet the child and reduce the cerebral symptoms; cold applications to head and legs and fore-arms. Second day, found the child somewhat improved, though still in a dazed condition; several evacuations, the last of which was saved for my inspection, contained twelve whole lima beans. Supposing this to be the solution of the difficulty, assured the mother accordingly; ordered the bromide resumed, if necessary, and a mixture containing ten drops each of tinct. myrrh, glycerine and sol. carbolic acid in glass of water; teaspoonful occasionally to relieve throat, which looked inflamed. The third call was on the following morning, when, contrary to my expectations, the child seemed unimproved; fever and pulse high; delirious, restless, throat becoming involved, eruption about the joints; resumed the diagnosis that the beans had dispelled; continued the mixture of myrrh, etc.; ordered inunctions of cool olive oil, and began the pilocarpine. At subsequent visits found the pilocarpine producing its specific effects, but the mother was unable to control the position of the child; this, together with its youth and delirious condition, allowed the saliva and mucus to gravitate, and, as a consequence, obstruct the breathing in a distressing manner; after every attempt to avoid this, I was obliged to discontinue it.

The child lived five days, never recovering consciousness. It was afterwards discovered that on the day before he was sick he had fallen from a fence, and hit his head. This accounted for the hitherto unexplained, persistent and severe cerebral symptoms. I report this case somewhat in full because it is the first adverse case I am compelled to record treated with pilocarpine, and because, like the uræmic case referred to, we were unable to so control the patient that serious obstruction to respiration could be avoided.

Tenth Case.—A girl with diphtheria, and the most aggravated that I have treated with pilocarpine. Dr. Houghton, who assumed the care of the case, kindly furnishes the following condensed report: L. T., seven and one half years of age; first seen July 5, at office; posterior portion of tonsils and posterior pillar of fauces coated with membrane; temperature, 102½; pulse, 128; ordered pilocarpine.

July 6.—Temperature, 104½; pulse, 144; membrane has extended forward; pilocarpine does not seem to cause much salivation; treatment continued.

July 7, A. M.—Temperature, 102½; pulse, 132; the pilocarpine not behaving as usual, the dose was doubled. Four P. M.—Pilocarpine acting well. Patient feels tired; membrane looks as if it had been soaked. Temp., 101½; pulse, 132.

July 8, A. M.—Temp., 98½; pulse, 120. Patient seems to be doing well. Ordered iron and quinine, pilocarpine and stimulant continued. Eight, P. M.—Temp. not taken; pulse, 118. Doing well. Tumefaction about jaws markedly decreased.

July 9, A. M.—Everything favorable. Temp., 98½; pulse, 124. Mother had applied tr. iodine to the neck before applying for aid, and raw surface had resulted, on which membrane was now forming. Pilocarpine discontinued. The case was seen twice daily thereafter, and at no time was the temperature above normal, nor the pulse above 124; prognosis good, especially so on the evening of the 10th of July.

July 11, at 8 A. M., after receiving from the father a drink of water, and requesting that he lie down beside her, she was seized with syncope, which proved at once fatal.

I regret that no autopsy was made; yet I feel that it would not have revealed the other possible cause of death, viz., closure of the glottis from detached membrane. It may require something of rashness to defend pilocarpine against the result in this case. While I do not deny that the heart was depressed, I believe the stimulant after each dose compensated for this depression, and, I think, had the refreshment on the fatal morning been a good stimulant instead of the water, death would not have taken place. I have been much annoyed by this weakness of the heart in diphtheria long before pilocarpine was thought of; in tracheotomy cases especially, where the patients have lived in defiance of the open enemies, have died from this sneak in ambush; and I refute the idea that because pilocarpine calls for additional drain upon the vital strength, it should be avoided. It would be as fair to reject tracheotomy for the same reasons. It may yet be shown that pilocarpine, by its energetic action upon the site of diphtheritic attachment, lessens in no small degree the absorption of the decomposed membrane, which, according to eminent authority, is the source of systemic infection. I draw this inference from the fact, which I omitted to state in its proper connection, that there was a marked diminution in the offensiveness of the throat in the cases reported. If pilocarpine, in this or any manner, modifies the severity of the attack, though at the expense of vital strength, its victim is in the hands of its friend, and not of its enemy.

Some observers report an uncertainty of action in producing salivation. This has not been my limited experience. Dr. Wm. G. Budington, ex-surgeon to the Panama R. R. Co., informs me that in an extended use of pilocarpine hypodermically in intermittent fevers, he never failed to produce this effect.

No one, even Dr. Guttman, claims pilocarpine as a specific, and diphtheria will continue to slay its victims; but in it we have a potent agent, new in action, and an excellent addition to our too meagre armament. I have met two contra-indications—youth and unconsciousness for the reasons already given.

THE USE OF ELECTRICITY IN THE TREATMENT OF DIPHTHERIA.*

BY G. K. SMITH, M.D.

Mr. President: So far as the use of pilocarpine is concerned in the treatment of diphtheria, I have had no experience whatever. I have been very much interested, however, in hearing the experience of Dr. Williams; and it appears that while it is a remedy which may have some objections, it still has a good many things to recommend it. I think its success so far has been very great, judging from the reports; and it may be that further experience will teach us more about it. It may teach us that there are some cases in which it can be used safely, and others in which it cannot. I am interested in Dr. Williams' paper, since he has shown that the use of pilocarpine induces a profuse flow of the secretions from the salivary glands, also from the mucous membrane lining the larynx, trachea, and bronchial tubes. In this way he accomplishes a result similar to that which I have gained by the use of electricity. Each of these remedies produces a profuse flow of the secretions from the mucous membrane and the swollen glands surrounding the air passages, thus promptly relieving the congestion and the swelling, which are often very dangerous to life.

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* The following remarks were made in the debate which followed Dr. Williams' paper on "Pilocarpine in Diphtheria."

It appears to me, however, that there is a difference in favor of the use of electricity, since the proper use of this remedy invariably makes the patient stronger, while we are told by Dr. Williams that in some of his cases the pilocarpine was depressing in its effects; that it may be used at the expense of the patient's strength.

If this be so, we must bear in mind that we commence the treatment of this disease in a patient whose strength is already very much depressed. It is a disease which is characterized by great depression of vital force from first to last. It seems to strike a blow straight at the power of the sympathetic system of nerves, and the blood-vessels supplied to the affected parts are so paralyzed that they cannot contract and send the blood onward in its course. The vessels become distended, the parts swollen, and secretion is brought almost to a standstill, while that which is secreted coagulates on the surface of the membrane lining the air-passages, and narrows their calibre, until, in some cases, the unfortunate patient is literally choked to death.

I recollect one case to which I was called. On the first visit I made to the patient, the patient said: "I have hardly had strength to-day to get up-stairs." She was acting as nurse to a lady who had been in confinement, and had the care of that lady and her child, and she said: "I have hardly had strength to lift that little child." Now, I said to her, we must make you feel stronger; and I took my battery—a common Faradic, Kidder battery—and after about twenty minutes' or half an hour's application, she said, "Doctor, I feel just about as strong as I ever felt in my life." Now, while this medicine may serve an excellent purpose—for there are cases in which it seems to depress the powers of life—it does seem to me that the use of electricity is very valuable.

In December, 1879, you will recollect that we had considerable diphtheria on the Heights. On or about that time a Mr. Rockwell, whose residence was on the Heights, near the Wall Street bridge, died of the disease, and there was a good deal of a scare about it. There was a good deal published in the newspapers about it. This particular man was very much prostrated from the beginning. Dr. Chapman, the family physician, said it seemed as if he had no nervous system to work upon. There was great prostration in the beginning. He had been nursing one of the family who had been sick, and was very much prostrated, and nothing seemed to help him at all. Soon after the death of Mr. Rockwell I was called to see a gentleman near by. He lived in Hicks Street, near Grace Church. This gentleman had diphtheritic sore throat himself, and his servant had also taken the disease, but had gone home to be treated among her friends by some physician in the place, and recovered. I saw this gentleman, and he was very much frightened at the reports he had seen in the newspapers, and he felt as if his death-warrant had already been signed. I said, "We will make you better soon," and, with the aid of the battery, I made the glands of the throat pour out their secretions—nearly half a pint of mucus and water—in a short time. This gave him very prompt relief, and in his case it was only necessary to make three visits before he became improved so much that it was unnecessary to apply the battery. He was now able to take care of his wife, who was taken sick of diphtheria, and required considerable attention. To use his own expression, "I used to fear diphtheria, but now I do not fear it at all, so long as I can get Dr. Smith to treat me with his battery." I do not speak this boastfully; I simply give his words to show his estimate of electricity in the treatment of diphtheria.

Now while I have not had quite as many cases to treat as some others, yet I have had a few. But I do not attempt to say electricity will cure every case of diphtheria, neither will any other remedy cure all cases. If the Almighty wants to make an angel of any one of our patients, I think he can do it in spite of all our skill.

I saw a lady last winter, and attended her in confinement. When the child was about a week old she was taken with diphtheria. I looked at her throat, and she said she had diphtheria. She said I need not attempt to cheat her out of it. She knew just what she had, for she had had diphtheria twice already. I tried to convince her that she did not have it, fearing the effect on her in her weak condition. I used the electric battery, and every time I used it she felt so much relief that she expressed her surprise. There was no comparison between it and the treatment she had had on previous occasions. Her strength kept up, notwithstanding her confinement was so recent. When she was just getting well her nurse was taken sick, and on the occasion of my first visit to her she made the remark: "I am so weak that I have hardly had strength to get up-stairs." Then I applied electricity, and there was a flow of mucus from the glands, and she said: "I feel almost as strong as I ever did in my life." I used the electricity twice a day, and that woman kept along and did considerable work, but it was thought wiser to let her rest during her sickness. We kept her in another room, however. She was treated with electricity, and after each application was comparatively strong.

In short, the use of electricity in that particular case led me to believe that we have in electricity, as applied to the muscles and glands of the throat, an agent which is very powerful for good. I have never seen pilocarpine. I have seen that remedy used only on one occasion. I was called in consultation with a gentleman who was attending a lady in puerperal convulsions. She had convulsions before delivery. We called in consultation also a gentleman who assisted at the delivery, and still she had convulsions, and finally died in convulsions. A short time previous to death, while her condition was a dangerous one indeed, he gave her an injection of pilocarpine, and it was but a short time before the expectoration was so profuse that the woman was literally drowned by that secretion ! I do not say that the woman was killed by the secretion, because she probably would have died under the best treatment known to science; but I think there are a few cases in which we can produce such results. I do not state this as a truth, but it appears to me that there are such cases in which it is advisable, for the strength of the patient should not be impaired. In other words, we should be very careful how we use medicines and means to produce so great secretion, for the patient may not have power to cough it out. If we do give pilocarpine at such times, I think we will drown our patient.

With regard to other cases of simple tonsilitis, where there is a great difficulty in breathing, I have seen most beautiful results, and that very promptly too, in relieving the congestion and re-establishing an excellent circulation at once. We all know the peculiar color of the mucous membrane lining the mouth and throat in these cases, and a single glance at this mucous membrane tells us that there is a very feeble circulation at that time. If now, by the use of electricity, we can strengthen the heart's action and give tone to partially paralyzed vessels of the throat, if we can make our patient feel strong, we will aid the circulation, at the same time we are doing that which is not simply giving strength to the muscular system, but the power of the heart is increased, the nervous system is strengthened, and the circulation itself is benefited at once. In diphtheria, I believe we have a defective action of the kidneys as a rule; the kidneys are not doing their duty fully, and the patient becomes poisoned very soon by the retention of urinary salts. Then we find that other glands attempt to do the duty of the kidneys, and in this effort we find these glands put to their utmost, and are so clogged up that there is very little secretion coming from them, and that secretion which does come looks like coagulated albumen on the surface of the membrane, and clogs up, as it were, the mouths of the mucous ducts, and the secretion is kept in which is destined to poison the system. If now, by the use of electricity, we can remove that secretion in sufficient quantities, it appears to me that we are accomplishing a great good, and we are doing this without any risk or tax on the strength of the patient. On the contrary, we add to the strength of the patient, and I think we increase his chances of life.

Perhaps I might with propriety say a few words in regard to the method by which I apply electricity.

I place the feet of the patient in a bath of water as hot as it can be borne with comfort, and I put in that water one, two or three tablespoonfuls of saleratus. I then take a glass of cold water and put some saleratus in it, and with this solution wet the electrode which is to be applied to the throat. The negative pole of the battery is put into the bath in which the feet are placed. The positive is to be covered with cotton and used in the throat, on the tongue, and in the nose if it be needed there. Of course the sponge handles or ordinary electrodes cannot be used in these localities; but a very convenient one for the mouth and throat is made by covering the blade of a dinner knife with a thin layer of cotton, which is to be soaked with the solution of saleratus. The cotton also serves to keep the soft parts of the mouth and throat from direct contact with the metal, which otherwise would cause pain. The mouth should be kept open, so that the teeth will not touch the electrode. A convenient electrode for the nose is made by winding a thin layer of cotton on a wire.

Thus prepared, the patient is seated in a chair, if able to sit up. The feet are placed in the bath, and the patient holds in his lap a basin to catch the saliva as it flows from the mouth, or as he has occasion to spit it out. The physician should be careful not to sit in front of the patient, for fear that the patient will cough and blow his poisonous secretions in his face. You are aware that two of the members of this Society have died from getting in the mouth the secretions of patients on whom they had performed the operation of tracheotomy. Sitting near the right side of the patient, he dips the electrode into the saleratus water to wet the cotton; then placing it on the tongue, he holds the knife by its metallic handle in the left hand, while he lays the right hand very gently on the sponge of the positive electrode. The current will now pass through the operator, and he can regulate the power of the current to the ability of the patient to bear it without pain. If he wants a stronger current he can grasp the sponge a little tighter. As soon as the patient becomes accustomed to the current on the tongue, the operator may pass it (the electrode) gently up to the side of either tonsil. Watching a good opportunity, he can now pass it back to the posterior wall of the pharynx, and even down to the epiglottis. This last position is likely to make the patient cough, and will, in some instances, make him vomit. In either case mucus in large quantities will be thrown out, and it will become necessary to remove the electrode; but before this is done the current should be broken by raising the right hand from the sponge electrode. The cotton on the electrode should be secured by winding a little thread around it, and the operator should be careful not to let the electrode touch the teeth, as that will cause pain. If the current passing through the operator be too weak, he may bring the positive sponge up and touch the handle of the knife. The electrode must be removed occasionally, to give the patient a chance to breathe, to spit, etc. It is not necessary to use a strong current. The electrode for the nose can often be passed back as far as the posterior wall of the pharynx.

I was called in consultation on one occasion to see a gentleman who was suffering very much. He had very intense thirst, and his throat was so swollen that he could scarcely talk, and I suggested to the doctor who had called me, the use of electricity in the throat. He said he had no battery. I had one in my carriage, and said he was welcome to use it. We brought it in, and in a few minutes' time after its use, the man, who was a powerful man before he was taken sick, but was now reduced, said: "I feel almost as strong as I ever did." The next day the doctor got a battery of his own, and said he could do it himself: it would not be necessary for me to come again. The doctor tried it, but he used so strong a current on one or two occasions that he would not let him use it any more. The current was too strong. It should be just strong enough to be comfortable and agreeable, and so that it will not make the patient fear it. I can use it with children, and have done so with marked effect for good; and I believe that if this remedy be used, in conjunction with other remedies—and I recommend that no gentleman should hang his hat on that peg alone, or any other, but let him use it and his other remedies—and he will find great benefit.

There is one point which I had forgotten to mention. I stated that I provided a glass containing a solution of saleratus and water. I use that for the purpose of dipping the knife in it; then I apply the knife to the tongue, and almost immediately it seems as if that solution is a solvent of the thick secretions in the mouth and tongue. The mouth is dry as it can be, without any secretion, except that which is coagulated on the surface of the mucous membrane. Then, when the knife is allowed to rest on the tongue, there will be almost a stream of saliva running steadily out of the mouth.

DISCUSSION.

Dr. Harcourt said he had been very much interested in the remarks of Dr. Smith, and they had struck him very forcibly. It was a very interesting application of electricity. It never occurred to him before, although he uses it on very many occasions. Yet he failed to see how such a mild current could produce the effects which the doctor details. When applied to the trophic nerves the effect is understood; but he could not see for a moment how the electric current is enabled to produce the hypersecretion spoken of; and especially when one electrode is applied in the basin of water in the form of a foot-bath, and the other to the tongue or tonsils. The current necessarily must be very, very slight there; in fact, the currents are so slight that he failed to see how the beneficial effects are produced. We know that when paralysis results from diphtheria, electricity is always in order; but this is a new application in his experience; still, we should never close our eyes to results because we do not understand them.

Dr. Burge asked how strong Dr. Smith made his solution of the saleratus with which he saturated the cotton?

Dr. Smith replied that he usually used a saturated solution. If it is too strong it can easily be made weaker. It is not an unpleasant solution to put in the mouth. I have had patients say that it was one of the pleasantest applications that they could put in their mouth during the ravages of the disease. I find, too, in other sickness, when there is dryness of the throat, that this solution of saleratus is a very pleasant mixture for the mouth. They never complain of it in diphtheria, and, in short, it is about all the local application I make to the throat during the treatment. I have never been in the habit, since I have used this remedy, of using iron or other irritating applications.

Dr. Burge was thinking of how far salivation was due to saleratus, and how far to electricity.

Dr. Smith was of the opinion the saleratus acted as a ready solvent. Now we know that if we take into our mouths certain things, as lemon juice, it creates a flow of saliva at once. So if we take into the mouth the solution of saleratus, it acts in the same way. It certainly is a safe application. Then we know by the color of the throat afterwards that the circulation has been very much benefited.

Dr. Harcourt asked how often the application of electricity was made, and for how long a time.

Dr. Smith: Not oftener than twice in twenty-four hours. He thought it advisable to do it as often as that. As regards the time, in the first place he did not want to tire his patient. After a time they can bear it better. The mucus will often flow in a stream at once. It will usually flow more or less all the time while you are away until you come again.

Dr. DeBowes had been interested in studying the effect of this disease on the nervous system. He thought the reason why the tonsils were congested, while other tissues of the throat were not, was simply because the vasomotor nerves supplying those parts were paralyzed, in whole or in part, thus allowing the expansion of the blood-vessels supplying those parts, and hence the congestion. The doctor considered some points in the *modus-operandi* of diphtheritic poison, and concluded by commending the use of electricity as a remedy. As gangrene may be removed by the aid of the battery, so may diphtheria.

Dr. Smith: I trust that the Society will pardon a few more words on the use of electricity in the treatment of acute diseases and serious injuries which threaten life. We are all familiar with the use of this agent in the treatment of chronic diseases; but if I am not mistaken, we have a much larger field, which promises a richer harvest in good results. We have seen its effect in diphtheria, and I have found it beneficial in other congestive diseases. Wherever there is a feeble circulation, threatening coagulation of blood in the vessels and consequent death of parts, it seems to come to the rescue "like a strong man armed." It is invaluable in the treatment of fractures. With its aid we can restore the function of the blood-vessels partially paralyzed by the injury, and thus be more sure of a bony union. By the use of this agent, as soon as union is secured, we can prevent much of the disability which arises from adhesion of muscles to the bony callus and to other structures lying in close contact. Inflammations of the middle ear, threatening suppuration, will often yield readily to this treatment. A pair of electric soles, worn inside the stockings, will often give warm feet in ten minutes' time to one who has not previously had warm feet in twenty years.

THE MEDICAL SOCIETY OF THE COUNTY OF KINGS.

The Medical Society of the County of Kings held a regular stated meeting on the evening of Tuesday, July 19th, 1881, the President, Dr. Jewett, in the chair, and Dr. Wyckoff, Secretary.

The meeting was called to order at a few minutes after eight o'clock.

The Secretary read the minutes of the previous meeting, which were approved.

The following propositions for membership were made: By Dr. J. C. Snively, Charles H. Althaus, N. W. cor. Johnson and Adams Sts., M.D., University N. Y., 1881; by Dr. E. A. Lewis, Louis F. Criado, 141 Clinton St., M.D., Col. P. and S., N. Y., 1879.

The Council reported acceptance to membership of the following duly nominated candidates: C. A. Fortun, M.D., Univ. N. Y., 1871; F. A. Cowles, M.D., Univ. N. Y., 1881; and H. W. Burnard, M.D., Col. P. and S., 1877.

The report of Council in reference to the enforcement of the Registry Law was, on motion, postponed until after the scientific business.

The first paper of the evening, entitled, "Mercurial Fumigation in Diphtheria and Croup," was then read by Dr. J. Corbin.

Dr. White asked the author of the paper whether he had found this method of treatment when used early to be a preventive of laryngeal diphtheria.

Dr. Corbin replied that he had used it only after the disease had occurred.

Dr. White remarked that the method of treatment advocated by Dr. Corbin was new to him, and he would bear it in mind. He did not suppose the subject of the general treatment of diphtheria was under discussion, still he would mention the fact that during the last year he had, he thought, prevented the spread of diphtheria by treating it early with carbolic acid. This is not a new remedy, and he merely spoke of it by way of emphasizing that method of treatment. He used pure carbolic acid and glycerine in equal parts, to be applied freely every twenty-four hours, or as often as necessary.

Dr. Burge: The doctor speaks of having used fumigations in his three cases "persistently" during three days. Did he mean that, or how often did he use it?

Dr. Corbin replied that he applied fumigation every two hours.

Dr. Jewett said he had had the privilege of seeing two or three of the cases, and there were one or two to which he desired to direct attention. He was very strongly impressed with the value of this method of treatment, and had no doubt that fumigation had some advantages over other methods of administering mercury. In the third case, the knife was held in abeyance for twelve hours, and on the second appointment it was decided to defer an operation. In the case which was tracheotomized, it was noticed that the wound was slow in healing—the antiplastic effects of the mercury being evident. In that case he had no doubt but that the child recovered with a less extension of the membrane than would have occurred had the mercurial fumigations, before the operation, not been used.

DR. RUSHMORE asked whether any re-formation of the membrane had been noticed after loosening, as in other methods of treatment.

DR. CORBIN thought not. Every case had progressed steadily towards recovery.

DR. HARCOURT inquired whether these cases were accompanied by the usual diphtheritic symptoms, such as enlarged glands, ulcerated sore throat, disturbance of the urinary apparatus, catarrhal symptoms, etc.

DR. JEWETT reminded the author of the paralytic symptoms present in one of the cases.

DR. CORBIN: In one case the membrane seemed to be almost exclusively confined to the surface of the tonsils. There was no effusion of the nose or the posterior nares, and it seemed to be at first a mild case. He saw that child, however, expectorate a piece of membrane 3½ inches in length. In the second case, in which Dr. Jewett performed tracheotomy, the membrane which covered the tonsils was like a piece of chamois skin; it was frosty white, tough and tenacious. The child is now suffering from that form of paralysis which sometimes follows diphtheria. The third case was similar to the second in its course. In the fourth case there was some enlargement of the glands on one side of the neck. In all there was exceptionally high temperature, from 103° to 104.5°. There was no blood-poisoning present in any of them. In answer to a question as to whether he would recommend this plan of treatment in adults as well as children, he replied that he would recommend it in sthenic cases.

DR. JEWETT said the tolerance of mercurials by children and adults was well shown in one case. While the treatment caused salivation in the mother, the child showed no symptoms of mercurial poisoning.

DR. BURGE thought there would be difficulty in drawing a line between a sthenic and an asthenic subject. Of course, in the early stages of the disease in a sthenic subject, there would be no difficulty. The tendency to asthenia in this disease is so great that there would be great difficulty in knowing just where to draw the line.

The second paper, entitled "Pilocarpine in Diphtheria," was read by Dr. H. F. Williams.

Discussion on the above paper being in order, the Chair was requested by Dr. Williams to invite Dr. G. K. Smith to favor the Society with his views of the treatment of diphtheria.

DR. SMITH was so requested, and said: (See page 161.)

The Society passed to executive business.

THE PRESIDENT called for a report from the Medico-Legal Committee. The Committee did not respond.

THE SECRETARY then read that portion of the report of Council which had been deferred earlier in the evening, namely, the proceedings and recommendations touching the matter of the enforcement of the new Registry Law.

Before final adjournment, the President declared the full election to membership in this Society of the following gentlemen: Dr. E. H. Squibb, Dr. H. Plympton, and Dr. F. Fuller.

The Society then adjourned.

ʼΑσκληπιὸς ʽο Σωτὴρ

Χαρμα μέγ᾽ ανθρωποισι, κακων θελκτῆρ᾽ οδυναων.

Hymns of Homer, No. XVI.

PROLIFERATIONS.

——The Council Meeting, July 13, was honored by the attendance of Dr. F. R. Sturgis, of New York city, who was present by invitation, for the purpose of explaining to the Council the action of the New York County Medical Society in respect of their prosecution of illegal practitioners under the law of 1880. Dr. Sturgis showed beyond question that that law is extremely faulty, that it can be made to fit the case of only a very few of the irregulars, that proof under it is full of difficulty, and that the cost of its prosecution is considerable; despite all this, his advice was earnest that whatever good there is in the law should be taken advantage of.

——The Angel's Whisper.—Dr. Charles Bell writes on the inward fits of infants, or moderate reflex muscular action sometimes produced by flatus, among their outward demonstrations being the rotation upwards of the eyeballs and a tremulous movement of the lips, producing the effect of a smile—such an one as Moore must have seen before he indited his conceit as to the angels whispering to the infant, and which may be found in the Irish Melodies, under the name of "The Angel's Whisper."—*Edinburgh Med. Jl.*, Dec., 1880.

——In Old England marsh poison in ancient times swept down the haughtiest heads of the nobility and of royalty. Henry of Agincourt, Wolsey, Devereux, Lord Deputy of Ireland, and a host of distinguished persons died of dysentery or some cognate disease. Mary of England, Pole, James I, Cromwell and Charles II died of marsh fever. It is a fact, albeit a quaint one, that the Reformation was, validly, the first step in the march of sanitary reform in England. It led to the filling up of the moats and stews, fish ponds and lakes, which furnished diet for fast-days, and which maintained a constant supply of paludal poison at the very door-step of every country house in England, just as the tank or water-pit does to-day beside each hovel in Bengal.—*Chevers on the Physician's Leisure.*

——THE TRANSPLANTATION OF BONE.—The greatest discovery in surgery, thus far in the year 1881, is that of Dr. William MacEwen. He has successfully transplanted bone—fragments of wedges of bone taken from patients for curved tibiæ—into the arm of a child whose limb was useless by reason of extensive necrosis: two-thirds of the humerus had been destroyed and no repair of bone had taken place. A good new humerus was the result, less than an inch shorter than its fellow.

——*Apropos* of this subject, and as a specimen of the loose writing that may be found now and then—even in high places—note the following: "As so frequently happens in such cases (*sic*) while Dr. MacEwen has been carrying his case to a successful issue in Glasgow, a similar proceeding had been determined upon by Mr. C. Macnamara, of the Westminster Hospital." The meaning of the editor of the *Lancet*, who wrote the above, is clear enough, but he unwittingly gives Mr. M. credit for a talent for parallelism in discovery that he himself would scarcely claim. See the *Lancet* for May 28: its editorial, as a whole, is pointed and instructive.

——THE INDEX MEDICUS.—"We have no hesitation in saying that this journal is the most valuable contribution to medical science of the present century."—*Glasgow Sanitary Journal.*

——FROM PUNCH'S SONG TO MEDICINE:

Here, surely, is a grand career—to cure our poor humanity
  Of all the ills to which our flesh is heir—a noble strife
To wage against each fell disease, disorder and insanity;
  To wrest the victory from death, and give the patient life.

And when you've studied all you can, in order categorical,
  When you have worked at every branch of science under sun,
You'll find—the illustration's not my own, but is historical—
  You pick up pebbles on the shore—you've only just begun!

——The Regular Monthly Meetings of the Medical Society of the County of Kings are held at 8 P.M. on the third Tuesday of each month, at Everett Hall, 398 Fulton Street.

The August meeting will be held on the 16th, at which the following paper will be presented:

Supplementary Report on Vaccination, by the Committee on Hygiene, prepared and read by Dr. N. B. Sizer, of the Committee.

MEDICAL SOCIETY OF THE COUNTY OF KINGS.

OFFICERS AND COMMITTEES FOR 1881.

President	C. Jewett, M.D., 307 Gates Ave.
Vice-President	F. W. Rockwell, M.D., 6 Lafayette Ave.
Secretary	R. M. Wyckoff, M.D., 532 Clinton Ave.
Assistant-Secretary	J. H. Hunt, M.D., 419 Hart St.
Treasurer	J. R. Vanderveer, M.D., 301 Carlton Ave.
Librarian	T. R. French, M.D., 469 Clinton Ave.

CENSORS.

B. A. Segur, M.D., 281 Henry St.
A. Hutchins, M.D., 796 De Kalb Ave.
B. F. Westbrook. M.D., 174 Clinton St.
W. H. Thayer, M.D., 171 Livingston St.
J. D. Rushmore, M.D., 129 Montague St.

DELEGATES TO THE MEDICAL SOCIETY OF THE STATE OF NEW YORK.

(1878 to 1882.)

Drs. J. C. Shaw,
J. D. Rushmore,
C. Jewett,
A. Otterson,

Drs. G. G. Hopkins,
J. S. Wight,
A. Sherwell,
W. Wallace,

Drs. J. Byrne,
B. F. Westbrook,
E. N. Chapman,
F. W. Rockwell.

Chap. XI., Art. 2, of By-laws: "Any Member elected as Delegate to the Medical Society of the State of New York, who shall be unable to act as Delegate during two successive years, shall be considered to have vacated his position as Delegate."

COMMITTEES OF THE SOCIETY.

HYGIENE.

Drs. B. F. Westbrook, B. Edson, N. B. Sizer.

THERAPEUTICS AND CLINICAL MEDICINE.

Drs. J. A. McCorkle, E. R. Squibb, A. Hutchins, B. A. Segur, W. H. Thayer.

OBSTETRICS.

Drs. F. A. Stuart, A. S. Clarke, E. Palmer, W. Wallace, J. R. Vanderveer.

SURGERY.

Drs. J. D. Rushmore, J. S. Wight, G. R. Fowler. A. J. C. Skene, F. W. Rockwell.

REGISTRATION.

Drs. W. E. Griffiths,
A. S. Clarke,
J. A. Jenkins,

Drs. W. G. Russell,
N. Matson,
F. W. Rockwell,

Dr. C. H. Potter.

PHYSICIANS' MUTUAL AID ASSOCIATION.

Drs. W. W. Reese,
G. W. Wells,
B. A. Segur,
G. W. Baker,
N. W. Leighton.
A. Hutchins
C. A. H. Szigethy

MEDICO-LEGAL COMMITTEE.

Drs. L. C. Gray, J. S. Wight, G. K. Smith.

PROCEEDINGS

OF THE

MEDICAL SOCIETY OF THE COUNTY OF KINGS.

VOL. VI. SEPTEMBER, 1881. No. 7.

SUPPLEMENTARY REPORT ON VACCINATION FROM THE COMMITTEE ON HYGIENE.

BY N. B. SIZER, M.D.

Small-pox is an eruptive, febrile, contagious disease, attacking individuals, as a rule, but once. First notable in history in the 6th century, it has remained a terrible scourge till the 16th century. There is reason to believe that Africa may have been its birthplace, and that it has extended its original limits by contagion.

In order that we may appreciate what small-pox was in old times, and to estimate how great a tax it levied on humanity, it would be sufficient to say that the most bloody wars were never as fatal as an epidemic of variola.

Simon compared this scourge to those armies of locusts which fall upon vineyards and fields, turning the most fertile spots in a few hours into barren deserts. Where small-pox raged, it had no mercy, sweeping down whole nations at one stroke. It has depopulated Santo Domingo, Brazil and Mexico, superadding its *own* horrors, to those of a European invasion.

More cruel than the Spanish invaders, it destroyed *three and a half millions* of aborigines, too few being left to bury the dead. De La Condamine tells us, that in the province of Quito alone, more than 100,000 natives died!

Says Catlin, "Thirty millions of whites are fighting to-day on the frontier, over the bones of twenty millions of red-men, of which six millions are victims of small-pox, the rest swept away by the bayonet, the sabre and whisky!"

Wherever the disease appears, we find always the same frightful devastation, in the absence of vaccination. Before the Jennerian epoch, none escaped the scourge. Those whose lives were spared, were condemned to bear the indelible scars of the disease, if they were fortunate enough to escape with sight. The English "Blue Book" for 1857 shows that two-thirds of the totally blind, cared for at the "Hospital for the Blind Poor," owed their misfortune to variola. Beside all this, it has been believed by many, beginning with Jenner, and including Blacke, Guersant and Allison, that small-pox is very apt to excite tuberculosis and struma in persons predisposed thereto.

History relates, in horrible detail, the human holocausts offered up on the shrine of this frightful disease before the discovery of vaccination.

The disease mowed down its victims, regardless of age, sex, or social condition; indeed, at times seeming to evince a predilection for the great ones of the earth. It killed the Queen of Sweden in 1741, and Louis XV. in 1774; a Grand Dauphin in 1711, and the Emperor of Russia in 1727, and there appears to be no other disease which has destroyed so many personages of high rank (Küssmaul "Zwanzige Briefe ueber Menschenpocken u. Kuhpockenimpfung," Freiburg, 1870, B. I. s. 8–9).

We have said that, as a rule, small-pox attacks an individual only once, as is the case with certain other eruptive fevers. This "law," although it has numerous exceptions, has been recognized for a long time, and was the cause of the introduction of "Inoculation." This consists in imparting the disease to people artificially, in order that they may not take it naturally in the course of an epidemic. It was observed, that when the disease was thus artificially propagated in non-epidemic times, it always shows less severity and is much less apt to mark the countenance. It was also noticed that, if the inoculated person had only a slight attack, he was as well protected in the future as if he had been very ill. The origin of inoculation is uncertain, yet we know that it was common from the remotest times in Georgia and Circassia, from a desire to preserve the beauty of the girls, who were destined to replenish the harems of Turkey and Persia.

It was practiced in Constantinople in 1693, from 1713 in England, and in 1715 Pilarini introduced it into Venice.

As we all know, Lady Mary Wortley Montague had it done to her son in Constantinople, and on returning to England praised the method to the Princess of Wales, who allowed the process to be applied to her children. In a few years the operation was fashionable, and practiced by the best physicians of England, such as Sir Hans Sloane, Maitland, Freind, Mead, Fuller, Arbuthnot, etc., (1717–1720.)

Inoculation, however, was not perfect. It was apt to create new foci of infection, so that the disease was apt to spread where it was not desired. The great problem was, "How can we protect everybody by inoculation, and yet not set up an immense epidemic?"

Vaccination was the child of these difficulties. Certain milch cows were observed to bear an eruptive disease upon their udders which was sometimes transmitted to those who milked them, these latter being, curiously enough, ever afterward protected in small-pox epidemics, being no longer able to contract variola. This fact had been noticed in 1781 by a Frenchman, named Raimond Pommier, a Protestant minister at Montpellier.

Jenner, later on, found the same tradition extant among the dairy maids of Gloucestershire, and this fact opened his mind to the true nature of vaccinia.

He was the first to comprehend that if variola protects from variola, by rendering sterile, as regards the *same* crop, the field it has once harvested, this same sterility might be the result of a previous occupation of the organism, by *other species* belonging to the same genus. On experimenting, it was found that persons inoculated with cow-pock lymph could not thereafter be successfully inoculated with small-pox lymph.

Can we explain, scientifically, the immunity procured by vaccine or variola? As in many phenomena of nature, the explanation cannot entirely leave the realms of hypothesis. As Pasteur says, "One cannot prevent the thought that the germ finds in the body of the animal a suitable place for culture, and that to accomplish its own growth and life, it alters or destroys certain matters in the tissues, either elaborating them for its own profit, or oxidizing them by the oxygen it takes from the blood."

All human beings do not appear to be equally favorable seats for the successful growth of the variolic or vaccinal germ. Some are *suitable*, others *unsuitable*. The germ appears to attack the former class; it settles and multiplies at the expense of the pabulum which it finds. This once exhausted, the germ dies of starvation, and, from this moment, immunity is attained.

If the germ attack a refractory subject, it fails and dies at the onset.

If the enemy obtains a lodgment, it multiplies and is nourished by the destruction of the pabulum; the patient thereafter, for an indefinite period, has nothing to fear. This period, though "indefinite," is not illimitable; a time may come when receptivity is re-established and can be again destroyed only, as before, by a new term of occupation.

In certain subjects, one colonization by germs is sufficient, others may need two or more. Since we cannot tell certainly beforehand, the only way to be sure of present immunity is to assiduously pre-occupy the ground by vaccination.

A certain amount of impediment is offered by the "anti-vaccinationists," whose nonsensical and crude ideas are often veiled by their ardor and noise in promulgation. It is, perhaps, well for us to be able to account for the "faith that is in us," and to take notice of some of their statements, absurd as they are. Their fundamental article is this:

"*Vaccination is not a preservation against variola, and those who practice it are dupes of an illusion.*"

This is a mere allegation, but as anti-vaccinators are fonder of making statements than of proving them, it is well to note it.

Let us first observe that small-pox has lost none of its power in epidemics if unchecked, and shows the same tendency to large mortality as centuries ago, and yet it slays infinitely less people, even in our worst modern epidemics, than before the days of vaccination. Is this because people have discovered the "art of living," as some say? Not at all. Those attacked are people in comfortable circumstances, as well as the poor and miserable. No "individual resistance" can explain it. Statistics show us that, *e. g.*, in Westphalia, the annual "death-rate" from small-pox during the thirty-one years *before* vaccination (1777 to 1806) was 2,643 per million, and fell during the years succeeding (1807–1850) to only 114 per million! In the same way the small-pox mortality in Copenhagen has fallen to one-eleventh; in Sweden, to one-thirteenth, and in Austria to one-twentieth! (Simon, "History of Vaccination," p. 357.)

In London, where once three to five thousand died by this scourge every year to the million inhabitants, the annual small-pox death-rate fell to 304 in 1841 to 1853; to 149 in 1854, and to 132 in 1855 per million, including England and Wales. These figures refer to a period when *systematic* vaccination was not yet provided for, and before the time when the utility of revaccination was established.

We also find that while vaccination was only *permissive* in Ireland (1842 to 1860, inclusive), the small-pox mortality was 1,972 per year on the average, but during the *compulsory* period (1864–73) the average death-rate fell to only 583.—(Seaton "Rep. to Local Govt. Board.")

Similar results are obtained in Sweden, 1774–1801, pre-vaccinal period, annual deaths, 1,973 per million; 1802–1816, permissive period, 479 per million; 1817–1877, obligatory period, 189 per million. That is, *in a country where the annual mortality from small-pox fell from* 1973 *to* 479 *per million on the introduction of vaccination, it fell still to* 189 *per million when the vaccination became compulsory!*

Variola has ceased to be a disease of infancy wherever obligatory vaccination is properly applied, and may be considered as exercising no special influence, except in the mortality of non-vaccinated children 1 year old and under, and those who have lost their first immunity by age.

Let us look at the mortality in children less than 5, in countries where children are compelled to be vaccinated before entering the 6th year.

In Scotland, where children must be vaccinated before they are 3 months old, the difference is easily seen—thus in 1871–77, in the 8 principal Scottish towns, the small-pox mortality is only 514 per million in children under 5 years. In Holland, vaccination not being obligatory, 1870-71, in the 8 principal cities, we find 6,122 deaths per annum per million in children less than 5 years old.

The most complete set of statistics are those of Geneva, showing death by small-pox from 1580 to 1760.

Age.	Deaths of Small-pox.	No. per 1,000 Deaths.
Up to 5 years,	5,467	805.00
5–10	1,058	155·75
10–15	126	18.50
15–20	54	8.00
20–25	39	5·75
25–30	31	4·50
Above 30	17	2.50
	6,792	1,000.00

Here we see that only 2 per cent. died above 15 years of age. Now, as we know that variola is *at least* as dangerous for adults, the very small death-rate among them can only be caused by the fact that their immunity is almost absolute, since they had variola as children, and recovered. Hence, where vaccination is not obligatory, small-pox is, and remains, a children's disease, and ceases to be so when we enter a country where vaccination must be done at three to six months of age.

The *average* annual mortality from small-pox rose in England during the last century to 3,000 per million inhabitants. The epidemic of 1871 and '72, the most fatal in *this* century, has furnished only 1,824 (in 1871) and 833 (in 1872) deaths per million.

Before the days of Jenner, London annually had 400 to 500 deaths by small-pox in a population of 100,000. In 1871 it was 242, and in

1872, 54 to the 100,000, and all this in an epidemic of rare intensity. It is useless to multiply examples, as the most ample details can be found as below: Ernest Hart, "The Truth About Vaccination," London, 1880. Dr. Lotz, "Rapport sur la question de la vaccination présenté au Conseil féderâl Suisse," Genève, 1880. A. J. Martin, "La Vaccination Obligatoire," Rev. Sciêntif. de la France et de l'étranger, Janv. 1$^{er.}$, 1881. "Bull. de l'academie roy. de Belg. Année, 1881, Vol. xv., No. 1, p. 37. Report of Commission on Vaccine."

A common anti-vaccine statement is, that figures are useless, and that the marked repression of variola at the beginning of this century was merely a coincidence, just as the disease disappeared from the sixth to the ninth centuries of our era.

But small-pox has never disappeared during *this* century; there have always been epidemics *some*where, and in them the disease has always displayed its old vigor among the non-vaccinated.

Vaccine never claimed to destroy the disease. Small-pox is *now* what it *always* was, only it has no control over those who have undergone a "pre-occupation," variolous or vaccinal, more or less recent. Vaccine never claimed to destroy small-pox, it only pulls its teeth and clips its claws.

Some contest the exactitude, others the sincerity, of statistics prepared by vaccinators. But can they persuade us that everybody, statesmen, official investigators, all, have conspired to alter and falsify documents? Certainly not. Do they then imagine that the statistics are wrongly interpreted? Let it be so! Do we not all know that any way we look at them, the figures give substantially the same results?

This is more than can be said of our anti-vaccine statistics! One example will suffice. At the International Congress of Vienna, in 1873, the first speaker on vaccination, Reitz, of St. Petersburg, an anti-vaccinator, read groups of statistics collected by Müller, of Berlin, arranging them favorably for his cause. Unfortunately for him, however, Müller himself happened to be present! and was instantly on his feet, and said:

> "You forget that I have *expressly* said, in the publication you quote, that the statement about the vaccination of the children cannot be considered as accurate; for when a child is taken with small-pox, and the parents are asked if it has been vaccinated, too often they do not care to confess negligence, and say 'Yes,' when it is totally untrue! or perhaps say that the vaccine had not taken, when it had not been used. In a recent epidemic," continued Müller, "I charged the physicians to rigorously examine into these cases, and I now have their figures in my hand, which show that during the year this course was pursued, we met *but one case* of death from small-pox in a child properly vaccinated."

Müller sat down amid applause, and Reitz collapsed.

Another class wish to show that vaccine is the source of dangerous accidents, and they bring forth parents of goitrous, rickety, lame and hump-backed children, strumous or syphilitic, who, not wishing to admit the impurity of the parent stock, are only too glad to lay it all on vaccine, happily, indeed, if not on the vaccinator himself.

Says Lotz, op. citatat, "We are very far from denying that the anti-vaccinators have led us to the practical and scientific advance of vaccination by their opposition, but we cannot be ignorant that to exaggeration they add false facts and lying figures.

"Kolb, for instance, who has some reputation as a statistician, is no exception, and the calm and moderate tone he affects, makes him still more dangerous. In Vol. 2, p. 18, he says: 'It results differently with the reports of the Registrar-General of Scotland, Pitt Dundas, who says, that from 1864 to 1873, 899 vaccinated children died of small-pox before the age of one year.' Now, *there are no such statements* in the report of 1873 and following years, but, on the *contrary* (Report 1873, p. XLI.), Pitt Dundas says, 'Cases of death from small-pox in children, one year old and under, who have been vaccinated according to rules, ARE EXCESSIVELY RARE.' And again (Report of 1878, p. 30), he says, 'As death from small-pox of an infant properly vaccinated, is, at least in *this* part of the world, a fact excessively rare, IF, INDEED, IT EVER HAPPENS!'

M. Lotz continues: "In Scotland, from 1864 to 1873, 1,430 infants, one year old and under, died of small-pox. How has Kolb managed to prove that 899 of these (two-thirds) had been vaccinated? Certainly not from the 'reports,' as we see above. It appears to us of great value for the welfare of a nation, that, from sanitary and economic standpoints, every one should have a just idea of the value of vaccine, and of obligatory vaccination. We have seen with what distrust one must view even the most simple statistics advanced by the enemies of vaccination, to say nothing of their medical and scientific deductions, which are as bad!

"We ought here to notice a memoir 'dedicated by Professor Vogt to the Swiss federal authorities.' (Adolf Vogt, 'Für u. wieder die kuhpockenimpfung,' Berne, 1879.) This is presented as a guide for officials, and yet is full of errors of calculation, of false comparisons, and illogical deductions. At pages 167–169, Vogt gives the mortality of small-pox at Geneva, from 1580 to 1760, and indicates (p. 168) the *average* population of Geneva, and the *average* number of *annual* deaths from small-pox, classing them by ages."

"Supposing that these figures are correct, one column gives the proportion of deaths per 10,000 inhabitants. These figures are *false*, and often 2½ times TOO SMALL, and their total 25 times less than the reality."

(See the following table.)

Age.	Average Population.	Average Annual Death-rate from Small-pox.	Proportion of Deaths to 10,000 Inhabitants.		Proportion of *true* proportion to Vogt's figures.
			After Vogt.	*True* Proportion.	
Up to 5 years.	1,383	30.37	87.6	219.6	2.5
5 to 10	1,163	5.88	20.2	50.6	2.5
10 to 15	1,058	0.70	2.6	6.6	2.5
15 to 20	1,570	0.30	0.8	1.8	2.25
20 to 25	1,928	0.22	0.5	1.1	2.2
25 to 30	1,783	0.17	0.4	0.9	2.25
30 and up	7,628	0.09	0.04	0.1	2.5
	16,513	37.73	0.9	22.8	25.3

"It would be rather too much to call these 'printer's errors,' for Vogt prints these results elsewhere in large type, and uses them as the basis of a comparison with the mortality of small-pox in *other* cities. The following is a corrected résumé :

Paris (1828–1836) 32 deaths from small-pox out of 10,000 persons 5 years and under.
Vienna (1863–1868) 64 " " " " " " "
Stockholm (1864–1866) 66 " " " " " " "
Chemnitz (1871–1872) 124 " " " " " " "
Berlin (1871) 160 " " " " " " "
Buda-Pesth (1874–1875) 185 " " " " " " "
Geneva (1580-to 1760) Vogt, 88 deaths from small-pox out of 10,000 persons 5 years and under.

TRUE proportion, 219.6 deaths from small-pox out of 10,000 persons 5 years and under.

"It is wrong to put down here cities where vaccination is incompletely carried out, especially in *epidemic* years. Leaving this question for the moment, all the other cities have less mortality than Geneva, and yet Vogt says (p. 169) that 'the small-pox mortality in children under 5 shows that Geneva was, at this time, (*i. e.*, before vaccination was discovered) infinitely more favored than several of our modern cities, who have spent large sums to arrive at this more than doubtful result, and incessantly impose upon the public serious annoyance, if not real injury.' Such are the statements placed by Vogt before the Swiss authorities. He ought not to wonder that distrust arises in our minds concerning all he writes or says. Let us also look at his other tables (pp. 171–175–181–182.) Vogt does not tell us whence he gets most of his material, although their authenticity is doubtless of the first importance as regards the accuracy of the conclusions to be deduced. Let us suppose, for the sake of the argument, that his figures relative to vaccinated and non-vaccinated, and to cases of small-pox and of deaths, are trustworthy. How can one calculate the death-rate for different ages and for the vaccinated and non-vaccinated? No one, not even M. Vogt, knows how many, vaccinated or not vaccinated, of these specified ages, live in these cities. This fact makes all such figures very dubious, and shows that they all must depend upon *arbitrary suppositions!* Besides, when we go back to his authorities, we find he quotes erroneously; thus, in his table of small-pox cases observed at Berlin and in England (pp. 180–181), the figures are given on the authority of a report of Müller, of Berlin (p. 316), and indicate 3,552 deaths from small-pox in 1871, while Guttstadt (p. 116), shows that the true figure is 5,086.

"These 'facts' are completely unsatisfactory, and this Vogt complacently ignores, to judge by the flourish of trumpets he makes over his 'facts'!

"As far as England is concerned, the 'Annual Reports,' for 1872 to 1874, inclusive, give number of deaths of vaccinated and of non-vaccinated, but the instances where these statistics are *precise* and *exact* are, at most, only a third of the total. Using, then, only the cases where the information can be relied upon, we get this result:

Ages.	Vaccinated.	Non-Vaccinated.	Cases of Death where the result of Vaccination was known.	Total Deaths of Small-pox.
0 to 1	127	1,028	1,155	3,296
1 to 2	65	318	383	944
2 to 3	69	261	330	875
3 to 4	86	226	312	842
4 to 5	113	241	354	931
5 and under.	460	2,074	2,534	6,888
5 to 10	331	835	1,166	3,679
10 to 15	186	281	467	1,538
15 and under.	977	3,190	4,167	12,105

> "Thus we see, that for 1 year and under, in 35 per cent. only the state of the vaccination was known; from 1 to 2, 40 per cent., and 5 to 10, 32 per cent. only. If even the number of vaccinated persons of *any* age, was known, we could not arrive at *certain* results. But it is *unknown* as much at Berlin as in England. The method by which Vogt has obtained his results is, to say the least, highly enigmatical."

Now then, when *reputable* people like KOLB and ADOLF VOGT twist statistics like this, what can you expect of their followers, the "ignobile vulgus?"

M. Bertillon ("Conclusions Statistiques contre les détracteurs de la vaccine," *Union Medicale*, Paris, 1855, Nos. 102 and 108; "La vaccine et ses accusateurs" Réponse à un lettre de M. Carnot, id No. 146) said, twenty-five years ago:

> "No matter how you study statistics, old or new, provided the laws of logic and of science are not abrogated, you infallibly arrive at conclusions which are crushingly decisive for the adversaries of vaccine in particular, and for those of scientific progress in general.
>
> "It is the unanimous voice of all statistics that, since the beginning of this century, the mortality has considerably lessened, at *all* periods of life, and *especially* at 20 to 30, an age at which the anti-vaccinators claim that small-pox (at first repressed) becomes *very* mortal, when really, the mortality at that epoch has diminished about *twenty-five per cent.!* That is to say, 1,000 people, 20 to 30 years old, now furnish only 10 or 11 deaths, while formerly of the same number and age, 13 to 14 died. The *other* ages are even *more* favored. Although the documents are insufficient to ascertain the diminution of mortality since 1820 in the army and the city of Paris, they suffice to tell us that (for Paris at least) there is a tendency to diminish the chances of death. Unfortunately, the Parisian statistics are not arranged to show more than this.
>
> "There is nothing, absolutely nothing, to sustain the eccentric and obstinate assertions of our anti-vaccine friends, whose errors are due to a general ignorance of the principles of statistics, and a complete want of power of criticism, which increases in importance in proportion as the documents are imperfect. At every moment we see them basing their ideas on hypotheses in absolute contradiction to the well-known results of standard and celebrated investigations. We see them take as the measure of the mortality of a nation, the *alleged* mortality of *stockholders!* At other times, the aggravated mortality of the military population! Worse still, they confound the table of survival with the table of population, and draw from the *one* conclusions proper only to the *other*.
>
> "Having no notion of the laws that regulate the movements of population, they take for a *calamity* the slow and progressive diminution of *births*, although this regular movement follows the prolongation of human life, and determines, in a nation, the predominance of *productive* ages. If they wish the 'survival' applicable to a certain city, whose population is the *most movable*, the most incessantly and profoundly stirred up in all its parts, they use a method which is founded upon *absolute regularity* in the succession of the living and dying. They take for stationary, a population incessantly increasing; they suppose it *diminishing* according to age, when it grows from one age to another. They are not satisfied to play so audaciously with statistics; they equally scorn the simple laws of calculation! They reason with quantities, true only in relation to others, as if they were *absolutely* true. And what is stranger still than all this nonsense, this defiance of science, is the perfect ease with which they aban-

don themselves to their folly, appearing to doubt if these matters had ever *been treated* by any BEFORE THEM ! ! They act as if they had never heard of the celebrated works of Malthus, of Ivernois, Benoiston, Villermé, Quetelet, so that the most favorable light in which we can regard them, is to attribute to their total ignorance the extenuation of their eccentric absurdities ! "

It is well known that an inoculation of calf lymph, humanized or not, will give the same temporary immunity as artificial or natural small-pox. No one can deny this temporary immunity. We may search in vain for one single case of small-pox acquired after a *recent* successful vaccination ! Jenner could prove his results in a way out of the question, nowadays, but *then* daily in practice. He took 100 infants and vaccinated 50. Some time after, he inoculated small-pox on the 100, and, *invariably*, the 50 unvaccinated took; the others gave negative results.

How can people presume to discuss the question after such facts? Anti-vaccination gets no support except from cases badly done, or badly recorded as to result.

The majority of anti-vaccinators are so inconsistent and so ignorant that time would be wasted in considering their ideas; but it is well to look at the theories of some of the more educated. Carnot ("Bull. de l' Academie de Medicine de Belgique," 1856–57, tome XVI.) claimed that vaccination saved from death twice as many minors as small-pox killed, but that the protection failed towards 10 years of age, and from 10 to 20 years the mortality increased, so that vaccinia took the place of variola, and nothing more. "*It has caused no new disease to arise*," says M. Carnot. His comrade, M. Verde de l'Isle, starts from another proposition and arrives at an opposite conclusion.

> For him "small-pox is an indispensable salutary crisis, by which nature expels original unhealthy principles, which, when they are maintained in the organism, become, later on, the source of the most terrible diseases which afflict the human race."

We must then let small-pox alone, for fear that the "variolic matter" should remain, as an enemy, in the organism ; this "matter" being only

> "Vitiated lymph, presenting precisely the same physical and chemical characters as strumous, cancerous, or tuberculous matter, which have one origin and one mode of elimination, to wit: small-pox."

He believes that typhoid fever is "small-pox reflected back"; that *croup*, *diphtheria*, *tuberculosis* and *phthisis* are the consequences of vaccination. Here, then, we have two anti-vaccinators that neutralize each other, and we may safely leave them knocking their heads together, while a third "comrade" comes forward to give them the "*coup de grace*," as follows :

> "The partisans of these two doctrines have overturned much to aid their ideas, but

they have proved nothing, and demonstrated nothing. They have convinced nobody, because, taken as they present it, the problem is insoluble."—(H. Boens, "Bull. de l'Acad. de Med. de Belg., 1879," p. 931.)

It is nonsensical, and contradicted by all we know of science, to suppose that Man has been created permeated with "unhealthy principles," for the sake of making him suffer, and often die, in the task of getting rid of them! It is far more reasonable to suppose that the virus of the transmissible diseases goes back towards the creation, as well as the palm tree or the animal.

Germs of transmissible maladies exist in nature, and Man must defend himself from them, as he does from cold, heat, parasites or wild beasts.

Nature has given us arms for defense, aided and increased by our intelligence. Vaccine is a powerful weapon. The anti-vaccinators would deprive us of them if they could, but we trust that may never be.

Certain modern questions arise, with which civilized nations are now face to face, and must meet them.

First, "*Are the means indicated by hygiene, public or private, sufficient to preserve the human race from small-pox?*"

At the "International Medical Congress," at Amsterdam, in 1879, the following was presented to the Congress:

"1. The individual receptivity of the needy classes ought to be diminished by the amelioration of the general conditions of their existence.

"2. Vaccination ought not to be recommended, except when the most energetic measures against the transmission of infectious diseases are not yet decreed by Government."

The *first* proposition is beyond all discussion, and all will agree with it. The second is *purely Utopian!* Shall we wait till all States, in *perfect* accord, establish *perfect* hygiene, and we are no longer threatened by the *chance* of importing disease from less well-managed places? Should we not rather say, "Let us vaccinate and revaccinate until the quarantining of small-pox *throughout* the *world* is *so* perfect that vaccination will no longer be needed?"

Our great-grandchildren will look after their own times, and, *perhaps*, may have no need to vaccinate. In the mean time, "*Si vis pacem, para bellum*" is a good motto while small-pox still exists! It is easy to see that this "perfect quarantine" would be an hundred times as vexatious to commerce and people, as any "compulsory vaccination" laws to individual liberty.

Statistics show that sometimes small-pox will leap over the squalid homes where we usually find it hidden, and attack high class, well-built, and salubrious locations, ordinarily free from its invasion. Let us remember that it can penetrate as well into the palaces of kings as into the shanty of the poor, and, as has been well said, seems to range itself in the great class of "parasitic diseases."

It seems to us, therefore, that "*individual receptivity*" ought to be destroyed, rather than to put our trust in Utopian ideas of "international hygiene," and we would reply that

"*The measures and means indicated by hygiene are not sufficient,* UNAIDED, *to protect us from small-pox.*"

A SECOND question is, "*Are we justified in believing that it is dangerous to vaccinate and revaccinate during an epidemic of small-pox? In other words, can one sow vaccinia and reap variola?*"

There seems to be no reason for this idea, beside a prejudice dating from the old "inoculation" times. It is well known that when variola was epidemic, it was not safe to largely inoculate. Then, again, no doubt there have been cases, and often in small-pox epidemics, where persons are attacked by small-pox in the early days of vaccination or revaccination, due to previous exposure and infection. These had the "variolous germ" in them before vaccination. A similar confusion of ideas may be seen in the saying, "The more you vaccinate and revaccinate, the longer the epidemic," while the *truth* is exactly the reverse: "The longer the epidemic, the more you need to vaccinate and revaccinate. Alas! prejudice is immortal; the laity talk it over, and, sad to say, sometimes find medical writers to reiterate their ideas.

Let us look more closely at this. There exist two distinct diseases, perfectly well known to-day—the variola of animals, and that of man; the one called "vaccinia" or "equinia" (cow or horse-pock), the other "variola" par excellence, the "small-pock" of the human race.

Recent researches have proved that vaccine lymph owes its properties to an active germ, which attacks the *equine* and *bovine* races, and produces in them, by absorption, a disease presenting perfectly definite characters, the so-called "spontaneous horse or cow-pock."

Some seem to doubt that this disease can arise by general infection, and prefer to attribute the "spontaneous" cases to *direct transportation* from the vesicle of the horse or cow to the hands of the farm servants.

The eruption of this disease furnishes lymph, which may be inoculated in other horses or cows, and also, with slight difficulty, into the human species, producing a similar transmissible product, this last product not seeming to be communicable by *general* absorption, but by vaccination only. Cow-pock has never been known to become epidemic in dairy farms, nor has ever been communicated to man as contagious diseases are generally transmitted.

As to small-pox, the facts are totally different: it passes from man to man by general infection, but *never* thus from man to animal. It may be inoculated into the horse and cow (and *perhaps* other animals), but not transmitted otherwise to them.

Many epidemics of small-pox of the greatest intensity have occurred in pastoral regions, but the herds have never participated in the epidemic. May we not, therefore, infer the existence of two viruses, one animal and one human? If man or beast be inoculated with vaccine, the result is always a pustule similar to the original, and similar, also, to the variolous pustule in *man;* but if you inoculate *human variola* into the cow, the result is quite different. A small red pustule appears, two to four mm. in diameter, slightly prominent, somewhat conic in shape, and NOT *umbilicated,* presenting at its apex the wound of inoculation. It begins to develop the second day, and attains the above appearance at five days. The twelfth day it has usually disappeared, after formation of a very small crust at its apex.

If we attempt to transmit this eruption to *another* cow, we shall *generally* fail, while the *vaccinal* eruption is *indefinitely* transmissible to that species. If we transmit the pustule to an infant, it is totally different; a crop of pustules appears, somewhat like the result of vaccine, but, this being *variolation,* the disease *may* pursue, at times, a grave course, as you might imagine, for it is simply INOCULATED SMALL-POX!

Here there can be no doubt; for if the children are inoculated as above, we get *small-pox.* If we re-inoculate a fresh heifer from *this* eruption in the child, the result is only the insignificant papule described above as pathognomonic of variola transmitted to the bovine race. The heifer becomes the "touch-stone" of *vaccine,* which is perpetuated, while *variola* dies out! As regards the child, our proof is yet more decisive. The pustulation is very analogous to vaccine, but it *acts* just like inoculated small-pox, and, in a certain number of patients, will prove to be generalized *small-pox.*

Chauveau's experiments are interesting on this point. ("Vaccine et variole, nouvelle étude sur la question de l'identité de ces deux affections."—*Gaz. Hebd.,* 1865, pp. 337, 347, 353, 386, 401, 418). On March 14, a three-months child, non-vaccinated, was inoculated with lymph from a variolated heifer. On March 17th one point shows a papule, developing later precisely like a vaccine pustule. March 22d, it is large, white, and umbilicated. A reddish areola, covered with small vesicles, surrounds it. This day a second child inoculated with lymph from this pustule.

March 23d, child No. 1 has fever and sleeps badly, nurses little, and vomits often. Small papules are appearing over forehead and trunk.

March 24th, developed small-pox.

April 1st, pustules drying up.

Child No. 2, inoculated March 22d, on the 29th (two years old) shows three papules, very like vaccine.

March 30th, two small vesicles appear near one of the papules.

April 3d, about fifteen variolous papules on face and trunk, the eruption ultimately fading away.

Similar experiments were made by means of human variolous lymph transmitted to the horse ; then with the equine variolous lymph thus obtained. These were entirely confirmatory of the other series of experiments.

Thus we see that variola always produces small-pox, and vaccine the bovine or equine pock.

The experiments of the Lyons Commission, communicated to the Paris Academy of Medicine on May 30th, 1865, have given the death-blow to a doctrine seldom heard here or in England, namely, that "human variola transmitted to a heifer becomes vaccinia." Certain doctrinaires considered this a good way to reproduce the vaccine disease ! The English experimentors unfortunately were deceived by the resemblance of the primitive eruption to vaccine, as detailed above. Of course, those "vaccinated" (?) from such heifers would be protected, but by "variolation," and such practice *increases* the total variola of a community, instead of *diminishing* it.

Hence we see that these same people are right in not "vaccinating" too many children at once "in the same place ;" and again, "sow vaccine, reap variola."

Thus easy is it to solve a question that has puzzled many. Let them show us, in *any* country, where vaccination and NOT variolation is practiced, ONE SINGLE CASE of variola thus produced, and we will admit our error. But the "single case" has never yet been found, and till then, we must continue to reply, "We cannot reap *variola* in sowing *vaccinia, nor the reverse,* any more than sowing rye turns it to wheat."

QUESTION THIRD.—"*Is vaccination always an inoffensive operation ? If not, can we avoid the inconveniences ?*"

It has been well said that "we cannot make the smallest opening in the skin of a human being without setting wide a door through which death may enter." Vaccination is a surgical operation, and is therefore dangerous *for that reason.* In addition, we introduce a germ virus—"microbion," "ferment," call it what you will—which promptly proliferates on the spot, and provokes the assemblage of facts called "inflammation." An exudation of blood plasma ensues, and we have a vesicle, seated in the "soft layer" of the skin ; the papillary layer also at times. The content is " lymph," holding a few wandered cells, broken-down connective tissue, and the "essential germ" of the disease. Later, many white cells emigrate, and we have the lymph become pus. Later still, the pustule dries up and forms a crust.

In primary vaccination, especially where much irritation is present, a certain amount of central necrosis of the soft parts may occur.

From the date of vaccination to the fall of the crust, three to four weeks may pass. About the fourth or fifth day the vesicle begins to be prominent, increasing up to about the tenth day, when it is a formed pustule, which shrinks and dries up.

The younger the lymph the more active it is, probably because the germ early comes to its height of vitality, and it is a mistake to call, as some do, young vaccine "false" vaccine.

Toward the seventh day, the lymph is sufficiently abundant for vaccination, although it is not so active as when younger. After the seventh day it takes *much* lymph to make a *good* vaccination, so that "seventh-day lymph" is chosen by preference.

In heifers, the process is forty-eight hours more rapid, and the lymph may be taken at the end of the third day, being, like that of the child, active in proportion to its youth.

Chauveau's experiments show that, by filtering out all but the lymph, the vaccine is as useless as water.

Vaccinal syphilis has been, in all times, the "hobby-horse" of the anti-vaccinators, and rightly too. There is no doubt that syphilis may be introduced with vaccine, provided only

1st. A lancet, or other instrument, be used uncleaned, after abrading a syphilitic arm; or,

2d. Vaccine from a syphilitic child be used, containing *other* fluids than *the lymph pure and simple.*

It is yet an open question if the germs of syphilis and those of vaccine can *both* exist in perfect condition in the same vesicle. It has never been proven that they can, and the fact is denied by competent authority. If we use syphilitic pus, or blood, mixed with vaccine, our papule will be, at *first*, the result of the vaccine; later on, as we so well know, a primary syphilitic sore will develop on its site. But if *vaccine lymph*, and that *only*, be taken from even a syphilitic subject, it has never been proved *once* that syphilis has been inoculated! If this were possible, we should meet cases of vaccino-syphilis by the *thousands*, instead of being almost *unknown.*

A. J. Martin, in a recent work, says:

"The inoculation of syphilis is the only danger to be feared, but, as Lotz has shown, countries where vaccination has been a long time obligatory, Sweden, Hanover, Hesse, Nassau, Wurtemberg, etc., have *never* presented cases due to vaccinal syphilis, and it must be noted that the fifty cases (more or less) truly authentic, having produced, say 750 infections, have been divided among one hundred millions of vaccinations done in Europe since eighty years."—(Op. cit.)

Note this important fact:

"No vaccino-syphilis in the perfectly obligatory countries, where vaccinations are done by special officers, detailed for the work."

England, France, Italy, countries where vaccination is partly only, or *not* obligatory, and where anybody vaccinates who chooses, have furnished the contingent of vaccino-syphilis. The use of heifer lymph, of course, totally prevents all danger and anxiety on the subject, *provided the instrument is carefully cleansed*, since the bovine race is not yet sufficiently civilized to contract a chancre!

Our anti-vaccinators have raised a great row about "vaccinal glanders," quoting cases of thirty-eight children, vaccinated at San Quirico de Orcia, who had vast phlegmons and joint abscesses, with eclampsia. On investigation, it seems they were vaccinated from pustules *excised* from the calf, and sent long distances, and kept several days before use in a warm climate! Merely cases of putrid infection, like a dissection wound! How foolish to blame vaccine for this. The *lymph* of the heifer, not its *putrid flesh*, is to be used!

Vaccination has been charged with destroying health, and making children strumous and tuberculous.

We are not aware that there is a single case, carefully observed, that demonstrates or renders probable any such idea.

It is true, indeed, that parents who are willing to conceal their *own* blood poisons and ruined health, or to exculpate themselves from the consequences of the sins of their youth, or carelessness as regards the laws of hygiene, are always ready to make accusations.

To prove these, precise, detailed, conclusive observations are needed. Among the millions of vaccinated children, some may be ill after vaccination, become tuberculous, or have skin disease or struma; but we know any febrile movement or even slight scratch may start out what was latent before. Let us beware of the "post-hoc" fallacy. If coincidences prove causality, what shall we say when a vaccinated child *falls out of the window?*

As for the theoretic arguments, we know that tuberculosis must be considered an infectious disease, and are aware of the bovine tuberculosis, the so-called "perl-sucht," a disease *similar* to, but not *identical* with the human disease. Let us note that there is yet no proof that the inoculation of serum *alone* from a tuberculous animal has ever induced the human disease.

The phlegmonous inflammations and erysipelas that sometimes follow may be *almost invariably* traced to want of cleanliness, or care, or idiosyncrasy. Happily these accidents are almost always avoidable.

The advice of the Privy Council to vaccinators is very useful. (July 29th, 1871):

> "Except in cases of great danger of small-pox, do not vaccinate children not in full health.
>
> "Be sure that they have neither *fever*, gastro-intestinal irritation, or skin disease; no post-auricular eczema, none elsewhere in the folds of the skin.
>
> "Except in case of danger, do not vaccinate children just over measles or scarlatina or when erysipelas is found in the house or neighborhood."

We may thus conclude that vaccination has no *real* danger if it be practiced with precaution and with necessary intelligence and care. It is not more dangerous, as a rule, than piercing the ears.

QUESTION FOURTH.—"*Ought vaccination to be made obligatory?*"

In Martin's work, already referred to, appears a striking illustration, showing how many to the million inhabitants died of small-pox from 1868 to 1873 in certain countries. In Holland and Prussia, non-obligatory countries, the figures were, 5,721 and 5,767 to the million; while in obligatory countries—England, Bavaria, Scotland, Sweden—the figures were, 2,376, 2,219, 1,534, 1,339 per million. This period comprises a severe epidemic also.

Vaccination is obligatory in the following countries since the dates annexed: Bavaria, 1807; Sweden, 1816; Wurtemberg, 1818; Scotland, 1864; England, 1867; *completely* since 1871; Ireland, 1868; Germany, 1874.

The great epidemic of 1868–73, which invaded all Europe, showed the importance of early, general, and obligatory vaccination, for the facts speak for themselves.

Since 1867, the deaths from small-pox increase each year; thus at Paris, 1867, 301; 1868, 605; 1869, 723. The war 1870–71 sent them up to 15,421, while the whole death-rate from wounds during the siege was only 4,862! Vacher's report leaves no doubt that the '69–'73 epidemic cost Europe at least 200,000 lives, partly due to the union of great masses of troops. Let us see how the various countries bore this epidemic. Sweden lost only 1,339 in the five years, while Holland lost 5,721 per million in the same time.

We do not care to specify at what intervals re-vaccination should be done, but would say that whenever an epidemic confronts us, we should always oppose fresh forces to the enemy.

THERE IS NO INSTANCE ON RECORD OF SMALL-POX ATTACKING A PERSON RECENTLY VACCINATED OR RE-VACCINATED WITH SUCCESS!

Obligatory re-vaccination is of course as necessary as obligatory vaccination, if we wish to be safe. The Liouville law, recently discussed in France, fixes re-vaccination at 10 and 20 years of age; that is, while at school, and before the age for the army draft.

Extra care must be taken, especially in persons coming from countries where small-pox is unknown, as was well shown by the unfortunate Esquimaux at Paris last winter. They contracted small-pox, and in spite of great care, the whole died in a few days! (Soc. Med. des Hôp., 11 Janv., 1881.) As regards the hysterical notions put forth as to the alleged infringement of "personal liberty" involved in vaccination, let us quote Martin again:

> "Those who, in exchange for the advantages of society, do not wish to accept responsibility most necessary for the public weal, have nothing to do but to seek some distant isle, where, like Robinson Crusoe, they may legislate to suit themselves. The liberty of disseminating disease is the one, of all liberties, that common interest requires to be put under complete control. No affection is more contagious than small-pox, and we cannot refrain from wishing that the law should impose, upon *all*, this innocent safeguard. The duty of the State consists less in imposing vaccination on those who object to it than in protecting the rest from the consequences of the *other's* obstinacy—and it ought, to do this, to forbid these eccentric persons, by obligatory vaccination, from spreading small-pox broadcast among the masses who share neither their fears nor prejudices."

But people say, "Can we not always vaccinate if danger threatens?" True enough, but the incorrigible carelessness and improvidence of the masses often causes them to forget the prophylaxis, even in the face of the danger.

It is the duty of medical bodies to enlighten the public mind in this, as in other sanitary laws.

DILATATION OF THE GALL-BLADDER; ITS TREATMENT BY ASPIRATION. REPORT OF A CASE.

BY P. H. KRETZSCHMAR, M.D.

Enlargement of the gall-bladder may be caused either by simple dilatation of the biliary passages, due to obstruction at some point or another, or it may be local, affecting the gall-bladder only, if the cystic duct or the neck of the gall-bladder is closed. The contents of the distended gall-bladder may either consist of bile, as is the case in dilatation due to obstruction in the ductus communis coledochus, or of a watery substance, as found in cases of the other form, frequently called "dropsy of the gall-bladder." Gall-stones may be so located at the neck of the bladder as to allow the entrance of bile into the bladder, but prevent its exit. Under such circumstances, the organ may become enormously dilated, its contents being bile. If the gall-bladder is filled with pus the name of empyema has been given to that condition.

The object of this paper is to call attention to the value of surgical interference, and more especially to the use of the aspirator, in case of dilated gall-bladder of either variety. Whether or not a radical cure can be brought about by its use in combination with judicious medical treatment is a secondary question.

We certainly can, in the large majority of cases, by evacuating the contents of the distended gall-bladder, relieve our patients from the most distressing symptoms, the severe pain which naturally accompanies all cases of chronic dilatation of the gall-bladder, and by so doing prolong life. A question which I have found discussed nowhere, seems to me of great importance. If the bile cannot enter the intestines to perform its physiological functions, but is retained within the gall-bladder and gall-ducts, simply to be absorbed and carried through the lymphatics into the blood, to act there as a poison, is it not advisable to remove such a superfluous substance from the body? Cholæmia or cholesteræmia—as the blood-poisoning occurring in severe cases of icterus should be called, according to A. Flint, Jr.'s* experiments—might be prevented by the early use of the aspirator.

Looking over the standard medical works and some of those which relate more especially to diseases of the liver, we find but meagre and rather discouraging information about surgical interference in cases of dilated gall-bladder.

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* Amer. Jour. of Med. Science, 1862. XLIV., p. 305; and N. Y. Med. Rec. 1873. VIII., No. 23.

Frerichs, in his great work on Diseases of the Liver,* says:

"We must never think of evacuating the contents by means of puncture, except when the rapid increase of the tumor endangers the rupture of the gall-bladder, or when symptoms of hectic consumption supervene. When there are adhesions the operation may be had recourse to without hesitation, but when there are no adhesions, or their existence is doubtful, the same precautions must be observed in making the opening, as already has been shown to be necessary in opening abscesses or hydatid tumor of the liver."

Such an excellent authority as Murchison tells us:†

"Now and then it will be necessary to puncture the gall-bladder and evacuate its contents, but this ought never to be done except the tumor is growing so rapidly that there is imminent danger of its bursting or the constitution is being worn out by hectic fever. From what has been said, it is also obvious that the operation is rarely advisable when there is jaundice with absence of bile from the motions. If there be no adhesions over the tumor, it will be necessary to produce them by means of caustic potash."

Von Schüppel—Professor in Tuebingen—writes in Ziemssen's Cyclopædia:‡

"As an important (sometimes the only) cause of the inflammatory irritation disappears with the evacuation and loss of tension of the gall-bladder, a single puncture, together with the thorough application of the other anti-phlogistic remedies, may lead to permanent recovery. Repeated puncture is sometimes necessary, because the gall-bladder fills anew with inflammatory products. Finally, however, recovery occurs, either because the cystic duct becomes permeable, and the cholecystitis subsides, or because, though the occlusion continues, at least the inflammation ceases and the sac grows smaller or is entirely obliterated."

Edward Goodeve, in Reynolds' System of Medicine, says:§

"In order to obviate the destructive effect of long-continued permanent obstruction upon the secreting tissue of the liver, Dr. Harley has advocated puncture of the distended gall-bladder and the establishment of a biliary fistula. The gall-bladder has often been punctured before for biliary distention when it has threatened to burst and to permit of extravasation of its contents. It would not be difficult to reach the distended gall-bladder from the surface. Of course there would be risk of extravasation into the peritoneal cavity, a circumstance very likely to occur after puncture, as the retracting liver would withdraw the gall-bladder from the abdominal walls. Dr. Harley recommends the use of escharotics to produce adhesions between the gall-bladder and the parietes of the abdomen previous to puncture, in the manner recommended by Dr. Graves for opening hepatic abscesses. Some such step would be necessary before attempting an operation. There would doubtless be danger in such an operation, but in permanent, non-malignant obstruction, such an operation would probably preserve the secreting tissue of the liver, and deserves mature consideration."

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* A Clinical treatise on Diseases of the Liver, by F. T. Frerichs, translated by Chas. Murchison. N. Sydenham Soc., London, 1859, p. 479.

† Clinical lectures on diseases of the liver, by Chas. Murchison, 2d ed. New York, 1877. Lecture xiii., p. 527.

‡ Ziemssen's Cyclopædia of the Practice of Medicine. New York, 1880. Vol. IX., p. 646.

§ A System of Medicine, edited by J. Russel Reynolds. Philadelphia, 1880. Vol. III., p. 353.

Trousseau, in his work on Clinical Medicine,* does not mention puncture of the gall-bladder as a remedy in cases of obstruction of the biliary passages, but he speaks of opening hydatid cysts of the liver by the use of the trocar or bistoury—after the application of caustics or the use of multiplied acupuncture.

Two quotations from Professor Austin Flint, Sr.'s writings may find a place here. In his work on the Principles and Practice of Medicine, he expresses himself as follows :†

"Puncture of the gall-bladder, in order to discharge its contents, is to be resorted to when, from the degree of dilatation, there is danger of rupture taking place into the peritoneal cavity. The latter accident is followed by fatal peritonitis. If punctured, the same precautions ought to be taken, with reference to peritoneal adhesions, as in opening an hepatic abscess."

In his late work on clinical medicine, in the chapter on diseases of the biliary passages, Flint says :‡

"When the enlargement is accompanied by pain and tenderness, these symptoms are to be relieved by the local application of poultices or the spongio-piline and anodyne liniments. Great enlargement involves more or less danger from perforation or rupture of the walls of the gall-bladder. In order to avoid this danger it is desirable to remove the liquid contents of the gall-bladder. The author cannot speak from personal observation, but aspiration would seem to be safe and the simplest method of effecting this object. If the liquid be pus, it may be advisable, employing proper precautions, as regards being sure of abdominal adhesions, to make a free incision, as in cases of hepatic abscess. In addition to the local treatment, tonic and analeptic measures are to be employed."

Felix v. Niemeyer,§ in the chapter on obstruction and closure of the excretory gall-duct and consecutive dilatation of the gall-bladder, says :

"As it is almost impossible to remove the cause of the constriction or closure of the bile-ducts, it is impossible to treat them successfully."

T. H. Tanner, in his "Practice of Medicine,"' does not mention surgical interference as advisable in cases of prolonged obstruction of the biliary passages, neither does

J. Wickham Legg, in his recent work "On the Bile, Jaundice and Bilious Diseases," refer to puncture or aspiration of the gall-bladder as one of the means for treating dilatation of the biliary passages.

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* Trousseau, Lectures on Clinical Medicine. Philadelphia, 1873. Vol. II, p. 560.

† A Treatise on the Principles and Practice of Medicine, by A. Flint; 4th Ed. New York, 1873; p. 580.

‡ Clinical Medicine, by A. Flint. Philadelphia, 1879; p. 395.

§ Text-Book of Practical Medicine, by F. v. Niemeyer. New York, 1879. Vol. I, p. 700.

C. T. Kunze* advises puncture of the gall-bladder, if we can be certain of adhesion between the abdominal walls and those of the gall-bladder, and if imminent danger of rupture exists.

Almost all these authorities speak of *puncture* of the gall-bladder, and—regarding it as a serious operation—advise us to resort to it only in extreme cases. The use of the aspirator for the purpose of emptying the distended gall-bladder, is hardly mentioned by either of them. Yet we may obtain, if we simply intend to evacuate the contents of that organ, the most satisfactory results by its use. That aspiration, the same as puncture by trocar, may have to be repeated is obvious, but it cannot be denied that the dexterous and careful use of the aspirator is attended by much less danger, and can be much more easily employed than the most skillfully performed operation of incising the gall-bladder, as mentioned by the different writers on the subject of diseases of the biliary passages. An opening into the gall-bladder by means of the bistoury necessarily involves considerable injury to the peritoneum, and for the purpose of evacuating the fluid contents of the gall-bladder, such an operation does not seem to be advisable. If the walls of the gall-bladder are not adherent to those of the abdominal cavity, the danger of bile escaping into the peritoneal cavity after incision by means of the bistoury is very great, and it would be entirely unjustifiable to perform the operation without taking such precaution as would guide us in a case of gastrotomy. In case of removal of stones from the gall-bladder, however, the opening is best made with a bistoury. The use of the trocar is objectionable for similar reasons. If we use a small instrument the flow of bile is apt to be obstructed on account of the pressure of tenacious mucus, which is apt to be mixed with the bile in cases of catarrhal or inflammatory conditions of the biliary passages and the lining membrane of the gall-bladder. If, on the other hand, a good sized trocar should be employed, the opening through the peritoneum into the walls of the gall-bladder would be quite large, and facilitate the escape of bile into the peritoneal cavity, after the bladder has been emptied and retracts. From experience gained in our case, it seems that a small quantity of bile oozing into the peritoneal cavity does not necessarily involve great danger, but such an accident should be prevented if possible.

The time has come when the internal administration of drugs in cases of distention of the biliary passages should not be exclusively relied upon. Surgical interference should be practiced much more frequently than has been done. The advantages which aspiration possesses over other means of emptying the dilated gall-bladder, may be thus formulated :

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* Lehrbuch der Prakt. Medicin. III. Auflage. Leipzig, 1878. Bd. I, p. 520.

I.—The operation can be performed with *safety*, without taking particular precautions in uniting the walls of the gall-bladder with those of the abdomen.

II.—The operation can therefore be done as soon as the diagnosis of a dilated gall-bladder has been made, if, from its size, there seems to be danger of rupture; or if the patient suffers much pain. Aside from these conditions, when aspiration should be resorted to without hesitation, the question presents itself whether it would not be good practice to evacuate the contents of a distended gall-bladder under all circumstances, simply to remove the superfluous bile, which, being cut off from its natural destination, is bound to be reabsorbed by the lymphatics, carried back into the circulation and produce, to a greater or lesser degree, a condition which is generally known as "cholæmia."

III.—A very fine trocar, such as would be of not much value in case of simple puncture, can be employed, and by means of suction even a tenacious fluid can be removed from the gall-bladder.

IV.—The insertion of a small trocar or an aspirating needle is almost a painless procedure.

V.—In cases of doubt as to the presence of gall-stones, a flexible probe can be passed through the canula and used as a sound.

VI.—Aspiration being a safe and painless operation, it can be employed for the purpose of aiding diagnosis.

The rules for performing the operation are thus formulated:

I.—Aspiration should not be delayed, but resorted to as soon as the diagnosis of distended gall-bladder has been made.

II.—A good sized aspirating needle, or a fine trocar should be used.

III.—The instrument should be introduced into the gall-bladder at a point as high up and as near to the border of the liver as possible.

IV.—On withdrawing the instrument, the punctured wound in the abdominal wall should at once be closed by some kind of plaster, or by the introduction of a stitch.

V.—The operation should be repeated as often as the gall-bladder becomes distended again.

VI.—The common rules of surgery as to cleanliness, etc., should be strictly adhered to.

A number of cases of surgical operations on the gall-bladder, either cholecystotomy or aspiration, are reported by Frerichs and Murchison; also by:

Marion Sims, Brit. Med. Journ., June 8, 1878, p. 811.
C. Kocher, Correspondenzblatt schweiz, Arzte 1878, No. 19.
George Brown, British Med. Journ., Dec. 21, 1878.
Keen, Am. Journ. Med. Sciences, Jan., 1879, p. 916.

Lawson Tait, the Lancet, No. 15, 1879, p. 730.

Lawson Tait, Medical and Surgical Trans., London, 1880, pp. 17-22.

J. M. Luis, Journ. de Méd.-Chiurg. et Pharmacolog., Brux., 1879, No. 18, p. 499.

A. Campbell, Proceedings Med. Soc. County Kings, 1879, p. 238.

And the following should be added to the list:

Conrad Schauz, age 46; born in Germany; married; carver by trade; with a good family history. Had been in good health until eleven years ago. At that time he suffered from a severe attack of malarial fever, lasting fifteen weeks. He says that during this sickness he had considerable pain in the hepatic region, but he does not remember having jaundice. He afterwards regained his usual health, and never missed a day at his work-shop on that account until three years ago. During the previous five or six years he had been examined by a number of physicians for life insurance on a small scale, and had been accepted by several of the so-called mutual aid associations.

Early in the fall, 1878, the writer was called upon to attend Schauz. The patient complained of pain in the hepatic region, nausea and occasional vomiting, loss of appetite and headache. His skin had a deep yellow appearance, the tongue was coated, the stools were clay-colored, and the urine dark brown. On examination it was found that the area of hepatic dullness was increased, the surface of the liver had a peculiar uneven feel, and there was tenderness over the right hypochondriac region. The diagnosis of gastro-duodenal catarrh, with temporary obstruction of the biliary passages was made, and the patient was placed on appropriate treatment. The case run a slow course; the patient suffered considerably, but, after three or four weeks, he became convalescent and made a good recovery.

Nothing was heard of Schauz until Christmas day, 1880, when the writer was asked again to see him professionally. He was found in bed, apparently suffering from a similar affection to the one he had two years previously. He gave the following history:—Five or six days before he applied for medical advice he complained of constipation and flatulence, followed soon by other disturbances of the digestive apparatus, such as anorexia, frequent eructations, nausea, and a sensation of fullness in the region of the stomach. These symptoms, together with the jaundice, which had been slight at first, had increased from day to day. The skin was of a citron-like color, the tongue was heavily coated with a grayish-white, dirty-looking deposit, and the breath had an unpleasant odor. The liver was found to be enlarged and very tender; the stomach and the intestines contained considerable gas, and the surface of the body was dry and rather hot. Temp. 101½°. The pulse was feeble and slow; the stools were destitute of bile, and the urine was of a dark brownish color. The patient did not complain much of actual pain, but he was much annoyed by pruritus, and had some headache. The same diagnosis was made as during the first attack, and similar treatment ordered. Moderate doses of calomel combined with jalap; diluted nitro-muriatic acid with strychnia were administered. Oleate of morphia and mercury, and warm poultices were applied externally. The diet was carefully regulated, solid food was discontinued, and the patient was placed in the best hygienic condition possible.

From day to day, all the symptoms increased in severity, and frequent emesis became associated with those already present. The skin had, during the early part of January, 1881, changed to an almost bronze-brown color; the pruritus prevented rest day or night; the temperature varied between 99½ and 101¾°; the pulse became feebler daily; the skin had lost its former dryness, but was covered with a cold, clammy moisture, and the tongue looked just as bad as ever before.

My friend, Dr. B. F. Westbrook, saw the case in consultation January 11th. The same peculiar, uneven and modulated surface of the enlarged liver mentioned above, in connection with the first attack of gastro-duodenal catarrh, was again observed, and this, together with the general cachectic appearance of the patient, gave rise to a careful consideration of the question of existing malignant disease—the latter being finally excluded, however. The hypodermic syringe was used as an aid in diagnosis. Chloride of ammonium in doses of 15 grains three or four times daily, together with laxatives, the local use of blisters were employed for about ten days without benefit.

Under the internal use of ox gall and phosphate of soda, together with the application of hot poultices over the tender liver, the patient seemed to improve somewhat. A peculiar condition of the patient's appetite and of his digestive powers may be mentioned here. While it would have been impossible for him to retain any common substantial food, and while he had not eaten meat of any kind for several weeks, he insisted upon taking some salmon one day and pot-cheese another. Trying a very small quantity at first, he eat, enjoyed and retained after a few days, a considerable quantity of both of these peculiar articles of food without feeling any unpleasant disturbances afterwards. Buttermilk was his favored drink, and he took large quantities of it.

During the month of March, the jaundice being as bad as ever before, the patient repeatedly took short walks, and on the fourth of April he felt strong enough to present himself at Prof. Armor's clinic at the Long Island College Hospital. The tendency of Prof. Armor's remarks indicated that he suspected the existence of gall-stones, which had caused both the icterus and the inflammatory condition of the biliary passages, though the writer had informed the Doctor that the most careful and continued examinations of the stools had never led to the finding of a stone. The exertion of going to the Long Island College Hospital, and appearing before a large class of medical students, was too great for our patient; on the 6th of April he had a severe rigor, and on the 7th he was suffering more than any previous day during his sickness. The liver became more and more enlarged, and severe acute pain developed, vomiting and all the other unpleasant symptoms reappeared with great severity. The temperature run up to 102° and the pulse, being very feeble, counted 88 per minute. April 10th, for the first time, could the distended gall-bladder be detected projecting beneath the border of the liver as a pear-shaped, fluctuating swelling, which, by careful percussion and palpitation, could be sharply defined, and after a day or two more, the exact outlines of which could be seen by simple inspection. The distention of the biliary passages caused so much pain that small doses of opium had to be administered.

April 14th, a hypodermic syringe was pushed into the tumor for the purpose of establishing a positive diagnosis. After two unsuccessful attempts, a syringe full of bile was obtained. The introduction of the needle caused no pain.

April 15th. Consultation with Drs. F. W. Rockwell and B. F. Westbrook. The patient at that time was much emaciated; he felt very weak, and was unable to stand up. The abdomen was distended and tympanitic to a high degree. Icterus intense; tongue badly coated; pulse feeble; temperature 100½°. The patient complained of severe pain, not only over the region of the liver, but also in the left lumbar region. The diagnosis of permanent occlusion of the biliary passages, probably caused by inflammatory disease, was made. Aspiration was decided upon with the view to relieve pain, to prevent rupture of the gall-bladder, and to prolong life.

Dr. Rockwell introduced a small-sized aspirating trocar, and *nine* ounces of bile were drawn off. The effect of removing the fluid was remarkable; the patient's expression showed the relief he obtained during the operation, and immediately after the withdrawal of the canula he declared himself free from pain. There was hardly any shock. After the bladder had been emptied, the canula was used as a sound to detect the presence of a stone, if such had been there. However, none could be felt. The stools had for weeks been carefully examined for the presence of stones without result.

The internal administration of phosphate of soda, and the use of blisters, together with hot poultices, were continued. On the following day, and for a week afterwards, everything went on satisfactorily. At the beginning of the second week, however, the unpleasant symptoms again increased in severity, and the dilated gall-bladder could be seen as before.

April 28th, the tumor was again aspirated, with the assistance of Dr. H. W. Rand, and *four ounces* of bile were removed. The patient again felt much relieved, and did well for a number of days.

May 5th, the third aspiration was made in the presence of Dr. George R. Westbrook. *Four ounces* of bile were withdrawn with the same beneficial result as before. On the following day symptoms of circumscripted peritonitis made their appearance; the temperature rose to 102¼°, and the patient complained of much pain and tenderness. Quinine and opium were given, and the threatening symptoms of inflammation disappeared. The tumor again became prominent, and it was decided to aspirate May 12th. Serious illness in the writer's own family prevented him from attending to his professional duties, and Dr. B. F. Westbrook saw the patient a number of times. He says:—The pain was very severe; distention of the abdomen marked; tongue heavily coated; bowels constipated. There was a slight rise of temperature. He gave a dose of calomel and jalap, and, after its free operation, administered a stimulating anodyne, viz.: morphia with spirits of chloroform, and the aromatic spirits of ammonia. This gave considerable temporary relief.

Resuming work May 17th, a visit to Schanz was made early in the day. The patient presented an agonizing picture. He said that he was ready to die, but he asked for relief of the terrible pain which he suffered. The gall-bladder was larger than ever before. With the kind assistance of Dr. George R. Westbrook, aspiration was again performed, and *fourteen* ounces of bile were removed at that time. Towards the end of the operation, considerable mucus and blood came away with the bile. The amount of force which had to be used to bring the tenacious fluid through the aspirating needle caused some pain. However, the same good result as obtained on previous days was accomplished. The repeated removal of the bile seemed to have a favorable influence on the constitutional symptoms of our patient; he was improving slowly and on several occasions expressed his desire to be aspirated just as often as "that lump" came back again. It was concluded not to allow again the accumulation of such a large amount of fluid, and as soon as another enlargement at the border of the liver became visible, it was decided to operate for the fifth time.

May 22d, aspiration was resorted to for the fifth time, Dr. G. R. Westbrook assisting again; the fluid was very thick and the flow was scanty. Only *three ounces and a half* of bile and mucus mixed with blood were withdrawn; the aspiration was more painful than ever before. The patient felt very well after the operation, and this time the pear-shaped tumor did not return. The fever subsided; the tongue cleaned off; the appetite returned, and though the integument remained yellow for a long time, in fact, it has a yellowish tint at this day, the patient continued to improve, and was discharged June 23d.

Five times has the gall-bladder been aspirated; *thirty-four ounces and a half* of bile have been removed within one month. At every operation the patient felt much relieved, and since the first withdrawal of bile the constitutional symptoms diminished in severity. At no time did the operation itself place our patient in danger, and generally speaking there was no pain attached to it.

THE MEDICAL SOCIETY OF THE COUNTY OF KINGS.

A regular stated meeting of the Medical Society of the County of Kings was held on the evening of Tuesday, Aug. 16th, 1881, at No. 398 Fulton Street, Brooklyn ; the President, Dr. Charles Jewett, in the chair, and Dr. Jos. H. Hunt acting Secretary.

The meeting was called to order at 8.05, about fifteen members being present.

The minutes of the previous meeting were read and approved.

The following proposals for membership were made : George H. Steward, M.D., L. I. C. H., 1881, No. 391 Wyckoff Street, by Dr. J. H. Hunt ; Arthur W. Brewster, M.D., L. I. C. H., 1881 ; Thos. C. Giroux, M.D., Univ. of N. Y., 1869, 142 South Fourth Street, E. D.; J. W. Fleming, M.D., L. I. C. H., 1880, 125 Fourth Street, E. D.

THE COUNCIL reported acceptance to membership of the following : Louis F. Criado, Col. P. & S., 1879 ; J. E. March, Bel., 1879 ; C. D. Beasley, L. I. C. H., 1879; A. H. P. Leuf, Col. P. & S., N. Y., 1879.

The first paper of the evening, entitled "Supplementary Report on Vaccination, by the Committee on Hygiene," was then read by DR. N. B. SIZER, of the Committee, who had also prepared the Report. Before reading the Report the DR. explained that it was intended to take up the general subject of vaccination, and then to consider the duty devolving upon the States and governments under the circumstances.

There was no discussion, but Dr. Burge arose, and in a few remarks, endorsed the paper fully. He said :

"Mr. President : I never have read, or listened to, an article on vaccination of that length before, to every word of which I can say AMEN!"

The second paper, by DR. PAUL H. KRETZSCHMAR, was entitled "Dilatation of the Gall-bladder ; its treatment by aspiration ; report of a case," was then read.

DR. E. H. BAILEY inquired of the reader at what time the color came to the stools, before the last operation or after?

DR. KRETZSCHMAR replied that there was a slight color to the stools after the second aspiration, at which time they commenced to have their natural color. They were grayish, but this color was not that clay-color which was apparent before the second operation. The color gradually increased until the end.

THE CHAIR announced the death of two members of the Society, namely: Dr. Charles W. Vrooman, of 376 Halsey Street, and Dr. Charles H. Potter, of 494 Third Avenue.

The following Obituary Committees, on motion, were appointed: namely, in the case of Dr. Vrooman: Drs. A. W. Catlin, P. H. Kretzschmar and G. A. Ostrander; and in the case of Dr. Potter: Drs. W. H. P. Pratt, R. M. Buell and A. J. Rooney.

A report from the Medico-Legal Committee having been called for, DR. L. C. GRAY, Chairman, reported progress, which report was accepted.

THE PRESIDENT declared the following-named gentlemen members of the Society: namely, Drs. C. A. Fortun, F. A. Cowles and H. W. Barnard.

There being no more business, the Society adjourned.

'Ασκληπιὸς ʽο Σωτὴρ

Χαρμα μέγ' ανθρωποισι, κακων θελκτὴρ οδυναων.

Hymns of Homer, No. XVI.

PROLIFERATIONS.

——CHARLES W. VROOMAN, M.D., died August 6, of phthisis pulmonalis. He was born in Canada, about 35 years ago. He was graduated in medicine in 1868, at the University of Michigan. During the past ten years he has practiced in this city, except when, from time to time, he went to the South, during the winter season, for the benefit of his health. He also was absent for a year or more as medical missionary to Siam.

In 1869 he joined the County Society, and was on its roll of active membership at the time of his fatal illness, which was lingering but not attended by great pain.

——CHARLES HENRY POTTER, M.D., died at 494 Third Avenue, Brooklyn, aged 38 years, from malarial fever and nervous prostration. He was a native of the State of New Jersey, and had been in practice in this city for thirteen years, coming hither immediately after his graduation from Bellevue Hospital Medical College, in 1868. In that year he became a member of the Medical Society of Kings County. His death took place August 6, after an illness of eight days. His body now lies at Elizabeth, N. J.

—The Regular Monthly Meetings of the Medical Society of the County of Kings are held at 8 P.M. on the third Tuesday of each month, at Everett Hall, 398 Fulton Street.

The September meeting will be held on the 20th, at which the following papers will be presented:

The Diagnosis of twenty-one cases of Fracture of the Neck of the Femur, by Dr. J. S. Wight.

Alveolar Abscess, with Antral Complications, by Dr. J. N. Farrar.

MEDICAL SOCIETY OF THE COUNTY OF KINGS.

OFFICERS AND COMMITTEES FOR 1881.

President	C. Jewett, M.D., 307 Gates Ave.
Vice-President	F. W. Rockwell, M.D., 6 Lafayette Ave.
Secretary	R. M. Wyckoff, M.D., 532 Clinton Ave.
Assistant-Secretary	J. H. Hunt, M.D., 419 Hart St.
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Librarian	T. R. French, M.D., 469 Clinton Ave.

CENSORS.

B. A. Segur, M.D., 281 Henry St.
A. Hutchins, M.D., 796 De Kalb Ave.
B. F. Westbrook, M.D., 174 Clinton St.
W. H. Thayer, M.D., 171 Livingston St.
J. D. Rushmore, M.D., 129 Montague St.

DELEGATES TO THE MEDICAL SOCIETY OF THE STATE OF NEW YORK.

(1878 to 1882.)

Drs. J. C. Shaw,
J. D. Rushmore,
C. Jewett,
A. Otterson,
Drs. G. G. Hopkins,
J. S. Wight,
A. Sherwell,
W. Wallace,
Drs. J. Byrne,
B. F. Westbrook,
E. N. Chapman,
F. W. Rockwell.

Chap. XI., Art. 2, of By-laws: "Any Member elected as Delegate to the Medical Society of the State of New York, who shall be unable to act as Delegate during two successive years, shall be considered to have vacated his position as Delegate."

COMMITTEES OF THE SOCIETY.

HYGIENE.

Drs. B. F. Westbrook, B. Edson, N. B. Sizer.

THERAPEUTICS AND CLINICAL MEDICINE.

Drs. J. A. McCorkle, E. R. Squibb, A. Hutchins, B. A. Segur, W. H. Thayer.

OBSTETRICS.

Drs. F. A. Stuart, A. S. Clarke, E. Palmer, W. Wallace, J. R. Vanderveer.

SURGERY.

Drs. J. D. Rushmore, J. S. Wight, G. R. Fowler. A. J. C. Skene, F. W. Rockwell.

REGISTRATION.

Drs. W. E. Griffiths,
A. S. Clarke,
J. A. Jenkins,
Drs. W. G. Russell,
N. Matson,
F. W. Rockwell,
Dr. C. H. Potter.

PHYSICIANS' MUTUAL AID ASSOCIATION.

Drs. W. W. Reese,
G. W. Wells,
B. A. Segur,
G. W. Baker,
N. W. Leighton.
A. Hutchins
C. A. H. Szigethy.

MEDICO-LEGAL COMMITTEE.

Drs. L. C. Gray, J. S. Wight, G. K. Smith.

PROCEEDINGS

OF THE

MEDICAL SOCIETY OF THE COUNTY OF KINGS.

VOL. VI. OCTOBER, 1881. No. 8.

THE DIAGNOSIS OF TWENTY-ONE CASES OF FRACTURE OF THE NECK OF THE FEMUR.

BY J. S. WIGHT, M.D.

When clinical observations and post-mortem examinations lead surgeons to different conclusions in regard to fracture of the neck of the femur, it must be that there are some difficulties in the way of diagnosis of this injury. It is not so much the kind of treatment required by a fracture of the neck of the femur that interests us at present: The more important question is, Shall there be any treatment? For, if it can be positively asserted that there is no fracture, as a matter of course, there ought to be no treatment of fracture.

When we have admitted the uncertainty and the not infrequent impossibility of making a diagnosis of fracture of the femoral neck, we may ask the following question: *Are there any signs by which we can be reasonably sure that there is a fracture of the neck of the femur,—on the supposition that crepitus is absent, and that it is not good practice to try to find crepitus.*

In order to bring some points to bear on the settlement of this question, I have tabulated the records of twenty-one cases of fracture of the femoral neck that I have seen, some with other surgeons and some in my own practice. The records that I have tabulated contain the following measurements:

(1.) Inside measurements from the superior anterior spines of the ilium to the lower ends of the internal malleoli.

(2.) Outside measurements from the superior anterior spines of the ilium to the lower ends of the external malleoli.

(3.) Measurements from the tops of the great trochanters to the lower ends of the external malleoli.

(4.) Measurements from the bases of the tibiæ to the lower ends of the internal malleoli.

(5.) Measurements from the superior anterior spines of the ilium to a line drawn transversely in front between the tops of the great trochanters. This is the *transverse femoral line.*

The object of all these comparative measurements is to determine the possibility of original asymmetry of the two limbs, and find out, as far as possible, if the injury to the hip has caused any shortening of the limb on the injured side, so that we can infer the *probability* of there being a fracture of the femoral neck.

Let me repeat, in this connection, some of the points constituting reliable surgical measurements: (1) The instrument of measurement should be an accurate steel tape-line, with feet and inches on one side, and metres and centimetres on the other side. This tape-line will not elongate under tension, *and the ordinary tape-line will elongate under tension.* (2) The measurements should be made independently; that is, when one is made, the points of the tape-line should be removed from the surgeon's hands, and new points for the other side of the body should be determined without any reference to the measurement of the first side. (3) In all ordinary cases, the leg may be measured quite accurately by semi-flexing it on the thigh, for this position brings the anterior edge of the base of the tibia markedly under the integument, so that it can be made quite as accurate a point of measurement as the superior anterior spine of the ilium. (4) In most cases the tops of the great trochanters can be so accurately compared as to make the measurements from them to the external malleoli of considerable value. (5) In all cases, the personal equation of the surgeon should be most carefully excluded from any measurement. (6) The lower limbs should be put parallel with the pelvis; for, in the ordinary measurements, adduction elongates and abduction shortens the lower limb.

My object is now to present a few brief points in the twenty-one cases of fracture of the neck of the femur above mentioned. These cases have come under my observation during the three years last past.

CASE I.—Mrs. ———, fifty years of age, seen by me about two months after having fallen nearly two feet on her *left* hip, gave the following measurements: Right lower limb, inside, 32 inches; outside, 32 inches; left lower limb, inside, $31\frac{3}{4}$ inches; outside, 32 inches; right leg, 13 inches; left leg, $13\frac{3}{8}$ inches. From the top of the right trochanter to the external malleolus, $29\frac{7}{8}$ inches; from the top of the left trochanter to the external malleolus, $30\frac{3}{8}$ inches. From the right superior anterior spine of the ilium to the transverse femoral line, one inch and four-eighths; from the left superior anterior spine of the ilium to the transverse femoral line, one inch.

These measurements show an apparent shortening of about one-fourth of an inch, *and an actual shortening of about five-eighths of an inch, on account of the left lower limb being originally longer than the right lower limb.* The top of the femoral neck was probably driven into the femoral head. There was an impaction. After two years, this patient goes about on two crutches.

Case II.—Mrs. ———, fifty years of age, was knocked down on the sidewalk by an intoxicated man, falling on her *left* hip, and was seen by me about two months after the accident. The following were the measurements: Right lower limb, inside, $29\frac{6}{8}$ inches; outside, 31 inches; left lower limb, inside, $30\frac{2}{8}$ inches; outside, $30\frac{4}{8}$ inches; right leg, $13\frac{1}{8}$ inches; left leg, $12\frac{6}{8}$ inches. Each trochanteric measurement was about 30 inches.

From the right superior anterior spine of the ilium to the transverse femoral line, one inch and four-eighths; from the left superior anterior spine of the ilium to the transverse femoral line, one inch. The right leg was longer than the left leg; the left femur was longer than the right; there was a shortening of the left lower limb of nearly four-eighths of an inch. The top of the femoral neck was probably driven into the femoral head. There was an impaction. After about two years the patient can walk comfortably with a cane—limping some. (Patient of Dr. Skene.)

Case III.—Mrs. ———, 64 years of age, seen by me three months and a half after falling about one foot, striking her *left* hip on the floor, gave the following measurements: Right inside, $31\frac{6}{8}$ inches; outside, $32\frac{4}{8}$ inches: Left inside, 31 inches; outside, $31\frac{4}{8}$ inches; right trochanteric measurement, $30\frac{7}{8}$ inches; left trochanteric measurement, $31\frac{1}{8}$ inches; right measurement to transverse femoral line two inches; left measurement to transverse femoral line one inch. The left limb was originally longer than the right by two-eighths of an inch. The apparent shortening was nearly an inch; the real shortening of the left limb was about an inch and a quarter. At that time the patient could walk on crutches. There had been a fracture of the neck of the *left* femur.

CASE IV.—Mrs. ———, 70 years of age, seen by me the day after she fell, striking her *right* hip on the sidewalk, gave the following measurements: Right inside, 35$\frac{2}{8}$ inches; outside, 36$\frac{1}{8}$ inches; left inside, 35$\frac{6}{8}$ inches; outside, 36$\frac{4}{8}$ inches; right trochanteric measurement, 33$\frac{6}{8}$ inches; left trochanteric measurement, 34 inches. Right measurement to transverse femoral line, two and four-eighths inches; left measurement to transverse femoral line, two and seven eighths inches. The left lower limb was originally one-fourth of an inch longer than the right. The apparent shortening was about one-half inch. The real shortening was about one-fourth of an inch. Impacted fracture of the right femoral neck—top of neck probably driven into the femoral head. Patient died the last of June, living about six weeks. No autopsy permitted. (Patient of Dr. Bunker.)

CASE V.—Miss ———, 35 years of age, seen by me one year after she fell down thirteen steps of stairs on her *right* side. The following measurements were made: Right inside, 29 inches; outside, 29$\frac{2}{8}$ inches; left inside, 30$\frac{4}{8}$ inches; outside, 30$\frac{6}{8}$ inches; right trochanteric measment, 30$\frac{2}{8}$ inches; left trochanteric measurement, 30 inches. Right measurement to transverse femoral line somewhat less than the left measurement to the transverse femoral line. Both legs are equal in length, that is, 13 inches. There was probably an impaction of the base of the femoral neck into the trochanters. Apparent shortening of right lower limb one inch and a half. Real shortening about one inch. Walks with a cane. (Brooklyn City Hospital.) This patient had a fracture of the base of the right radius.

CASE VI.—Mrs. ———, 64 years of age, examined on the same day she fell down a pair of stairs on her *left* side, presented the following measurements: Right inside, 31 inches; outside, 32 inches; left inside, 30$\frac{6}{8}$ inches; outside, 32$\frac{2}{8}$ inches. Right trochanteric measurement, 29$\frac{5}{8}$ inches; left trochanteric measurement, 30$\frac{1}{8}$ inches. Right leg, 13$\frac{4}{8}$ inches; left leg, 14 inches. Right measurement to transverse femoral line, two inches; left measurement to transverse femoral line, one inch. Complete fracture of left femoral neck. (Patient of Dr. L. D. Mason.)

CASE VII.—Mr. ———, 40 years of age, when 26 years of age fell 35 feet, striking on his *left* hip, was treated for fracture of the left femoral neck; walked on crutches for a year and a half, and with a cane six months more, and limps now. *Three weeks after the injury a diagnosis was made.* The following measurements were made Aug. 10th, 1880: Right inside, 30$\frac{6}{8}$ inches; outside, 31$\frac{2}{8}$ inches; left inside, 31 inches; outside, 31$\frac{4}{8}$ inches. Right trochanteric measurement, 29$\frac{4}{8}$ inches; left trochanteric measurement, 31 inches. Right leg, 13$\frac{2}{8}$ inches; left leg, 14 inches. Right measurement to transverse femoral line, one inch and two-eighths; left measurement to transverse femoral line, two-eighths of an inch. Left leg was six-eighths of an inch longer than the right; and the left lower limb was one inch and a half longer than the right. The left lower limb by the ordinary measurement was one-fourth of an inch longer than the right. This is the apparent elongation. The actual shortening was about an inch and one-fourth. This was a case of fracture of femoral neck—in which patient limps after 14 years. (Brooklyn City Hospital.)

CASE VIII.—Mrs. ———, 55 years of age, pushed down, striking the sidewalk with her *left* hip, on the day of injury, gave the following measurements: Right inside, 32 inches; outside, $32\frac{6}{8}$ inches; left inside, 31 inches; outside, $31\frac{6}{8}$ inches. Each trochanteric measurement was 31 inches; each leg measurement was $13\frac{4}{8}$ inches. Right measurement to transverse femoral line, one inch and two-eighths; left measurement to transverse femoral line, three-eighths of an inch. Complete fracture of left femoral neck, having the inner end of outer fragment against the upper edge of the femoral socket. The shortening was equal three-fourths of an inch. (Patient of Dr. Wight.)

CASE IX.—Mr. ———, about 50 years of age, fell, July 7, 14 feet, striking his *right* hip on the bottom of a canal boat; could walk some after the injury; locomotion improved August 31, when the following measurements were made: Right inside, $30\frac{6}{8}$ inches; outside, 32 inches; left inside, 32 inches; outside, 33 inches. Each trochanteric measurement, $31\frac{6}{8}$ inches; each leg measurement, $13\frac{4}{8}$ inches. Right measurement to transverse femoral line, one inch; left measurement to transverse femoral line, one inch and five-eighths. The real shortening was three-fourths of an inch. The diagnosis was impaction of the top of the femoral neck into the femoral head. (Patient of Dr. G. R. Westbrook.)

CASE X.—Mr. ———, 53 years of age, fell 10 feet on his *left* hip, leaving no mark of contusion. The patient weighed 193 pounds. The following measurements were made: Right inside, $35\frac{2}{8}$ inches; outside, $36\frac{4}{8}$ inches; left inside, $34\frac{2}{8}$ inches; outside, $35\frac{4}{8}$ inches. Right trochanteric measurement, $34\frac{6}{8}$ inches; left trochanteric measurement, $34\frac{4}{8}$ inches. Right leg, $14\frac{5}{8}$ inches; left leg, $14\frac{3}{8}$ inches. Right measurement to transverse femoral line, two inches and five-eighths; left measurement to transverse femoral line, one inch and three-eighths. The apparent shortening was one inch. The real shortening was one inch and one-fourth. There was a complete fracture of the left femoral neck—and the corresponding limb was perfectly helpless. (Patient of Dr. Wight.)

CASE XI.—Miss ———, 49 years of age, fell on her *right* side, while walking on the floor. She had some paralysis of right lower limb previous to the fall. Seven months after the fall the following measurements were made: Right inside, $33\frac{4}{8}$ inches; outside, $33\frac{4}{8}$ inches; left inside, $34\frac{2}{8}$ inches; outside, $34\frac{4}{8}$ inches. Right trochanteric measurement, $33\frac{6}{8}$ inches; left trochanteric measurement, $32\frac{2}{8}$ inches. Right leg, 15 inches; left leg, $14\frac{4}{8}$ inches. Right measurement to transverse femoral line, five-eighths of an inch; left measurement to transverse femoral line, one inch and four-eighths. Apparent shortening of injured limb, six-eighths of an inch; original asymmetry one inch and a half; real shortening equal two inches and two-eighths. The base of the right femoral neck was driven into upper end of femoral shaft. Patient walked with crutches. (Patient of Dr. Wells.)

CASE XII.—Mrs.———, 61 years of age, fell on the ice, striking her *right* hip, and gave the following measurements:—Right inside, $32\frac{4}{8}$ inches; outside, $32\frac{6}{8}$ inches; left inside, $32\frac{6}{8}$ inches; outside, 33 inches; right trochanteric measurement, $31\frac{6}{8}$ inches; left trochanteric measurement, $31\frac{2}{8}$ inches; right leg, $14\frac{4}{8}$ inches; left leg, $14\frac{2}{8}$ inches; right measurement to transverse femoral line, one inch and two-eighths; left measurement to transverse femoral line, one inch and five-eighths. Original asymmetry of lower limbs equals one-half inch; apparent shortening of injured limb, equals one-fourth inch; real shortening of the injured limb, three-fourths of an inch. Two months after the injury, the above measurements were substantially the same. The fracture was intracapsular and probably impacted. (Patient of Dr. Burge.)

CASE XIII.—Mr.———, 52 years of age, slipped on ice, and fell striking the *left* hip and side, and gave the following measurements: Right inside, $33\frac{4}{8}$ inches; outside, $34\frac{2}{8}$ inches; left inside, $32\frac{2}{8}$ inches; outside, $33\frac{2}{8}$ inches. Each trochanteric measurement was 32 inches; each leg measurement was $14\frac{4}{8}$ inches; right measurement to transverse femoral line was two inches; left measurement to transverse femoral line, was one inch and two-eighths. Actual shortening on the side of injury was over an inch. There was a complete fracture of base of femoral neck with comminution of trochanters. Two months after the injury, the patient could walk with a cane; his injured limb had in the meantime become nearly one-half inch shorter, making the shortening equal one inch and six-eighths. (Patient of Dr. Burge.)

CASE XIV.—Mrs.———, 57 years of age, fell on the sidewalk, striking on her *right* hip, and gave the following measurements: Right inside, $33\frac{2}{8}$ inches; outside, $34\frac{3}{8}$ inches; left inside, $34\frac{2}{8}$ inches; outside, $34\frac{5}{8}$ inches. Each trochanteric measurement was $32\frac{6}{8}$ inches; each crural measurement was $14\frac{4}{8}$ inches; right measurement to transverse femoral line was one inch and three-eighths; left measurement to transverse femoral line was one inch and seven-eighths. The real shortening was about one inch. There was a complete fracture of the base of the femoral neck. (Patient of Dr. Wight.)

Case XV.—Mrs.———, 70 years of age, going off a horse-car, fell to the pavement on her *right* side, gave the following measurements: Right inside, $31\frac{2}{8}$ inches; outside, $32\frac{2}{8}$ inches; left inside, $31\frac{6}{8}$ inches; outside, $32\frac{2}{8}$ inches; from top of left trochanter to lower end of condyle, $15\frac{4}{8}$ inches; from top of right trochanter to lower end of condyle, $16\frac{2}{8}$ inches; from crest of left ilium to top of left trochanter, $5\frac{6}{8}$ inches; from crest of right ilium to top of right trochanter, $4\frac{4}{8}$ inches; the shortening of right limb about one-half inch. Probably impaction of neck into femoral head. (Patient of Dr. Harrigan.)

Case XVI.—Miss———, 60 years of age, fell down two or three steps, being caught by some one passing at the time, before actually striking the pavement on her right hip gave the following measurements: Right inside, $32\frac{4}{8}$ inches; outside, 33 inches; left inside, $32\frac{4}{8}$ inches; outside, 33 inches; right trochanteric measurement, $32\frac{2}{8}$ inches; left trochanteric measurement, $31\frac{4}{8}$ inches; right leg measurement, 14 inches; left leg measurement, $13\frac{6}{8}$ inches; right measurement to transverse femoral line, one inch; left measurement to transverse femoral line, one inch and a half. *The usual measurements were the same*, that is, they exhibited no shortening. The right lower limb was originally three-fourths of an inch longer than the left. As the patient rested in bed the left lower limb appeared to be about one-half inch shorter than the right. The patient fell on her *left* hip twenty years previous to this time, breaking the left femoral neck; was treated in the Brooklyn City Hospital, and could walk quite well after two years. The first fracture was probably impacted; the second fracture was a complete one of the right femoral neck from a slight cause. (Patient of Dr. Wight.)

Case XVII.—Mrs.———, 50 years of age, fell, striking her *right* hip against the curbstone, and gave the following measurements: Right inside, $29\frac{4}{8}$ inches; outside, $30\frac{4}{8}$ inches; left inside, 30 inches; outside, $30\frac{4}{8}$ inches; right trochanteric measurement, $29\frac{6}{8}$ inches; left trochanteric measurement, $28\frac{6}{8}$ inches; each leg measurement, 13 inches; some shortening to the transverse femoral line on the right side; right lower limb about one inch longer than the left; the apparent shortening of the injured limb very slight; real shortening of the injured limb, about one inch. Diagnosis: The base of the femoral neck firmly driven into the upper end of the femoral shaft. Probably bony union took place in this case. (Patient of Dr. Rockwell.)

Case XVIII.—Mrs. ———, 56 years of age, fell on her *right* side and hip, as she was walking on the sidewalk, and gave the following measurements: Right inside, 33 inches; outside, 34 inches; Left inside, $33\frac{6}{8}$

inches; outside, $34\frac{4}{8}$ inches; right trochanteric measurement, $32\frac{4}{8}$ inches; left trochanteric measurement, $31\frac{4}{8}$ inches; right leg measurement, $14\frac{3}{8}$ inches; left leg measurement, 14 inches; right measurement to transverse femoral line, one inch and four-eighths; left measurement to transverse femoral line, two inches. Right lower limb was originally one inch longer than the left; apparent shortening of the injured limb, about one-half inch; real shortening of injured limb, about one inch and a half. Base of femoral neck driven into upper end of femoral shaft. (Patient of Dr. Wight.)

Case XIX.—Mrs. ———, 83 years of age, found on her *right* side in the street, gave the following measurements six weeks subsequently: Right inside, 28 inches; outside, $28\frac{2}{8}$ inches; left inside, $28\frac{5}{8}$ inches; outside, $29\frac{1}{8}$ inches; each leg measurement was $12\frac{2}{8}$ inches; right trochanteric measurement was $27\frac{5}{8}$ inches; left trochanteric measurement was 27 inches; right measurement to transverse femoral line was one inch; left measurement to transverse femoral line was one inch and five-eighths. The patient weighed less than 100 pounds, and could stand up with some assistance. The right lower limb had been shortened about one inch and one-fourth. The right lower limb had been originally about one-half inch longer than the left. The patient must have fallen on her right side and broke the right femoral neck, probably driving the base of the neck into the upper end of the femoral shaft. (Patient of Dr. Rushmore.)

Case XX.—Mrs. ———, 50 years of age, fell about four feet, from a step ladder, and struck mostly on the *left* thigh some four inches below the top of the femoral shaft. Two weeks after the injury I made the following measurements: Right inside, $31\frac{4}{8}$ inches; outside, $32\frac{4}{8}$ inches; left inside, 31 inches; outside, 32 inches; each trochanteric measurement was $31\frac{5}{8}$ inches; each leg measurement was about $13\frac{2}{8}$ inches; right measurement to transverse femoral line, one inch and four-eighths; left measurement to transverse femoral line was one inch and one-eighth. There was no difference in the lengths of the lower limbs of this patient till two weeks after the injury, when the femoral neck gave way quite suddenly, making a complete cripple of the patient. *The base of the neck had been driven into the trochanters in the first place, and the impaction had been broken up.* The reason that there had been no shortening of the limb during the impaction was that the femoral neck must have been quite horizontal in the direction of its long axis. After two months of treatment—the extending weight being eight pounds—the injured limb was about one inch shorter than the other. (Patient of Dr. A. S. Clark.)

Case XXI.—Mrs. ———, 56 years of age, fell, striking her *right* hip on the sidewalk, and four months subsequently gave the following measurements: Right inside, $33\frac{6}{8}$ inches; outside, 34 inches; left inside, $34\frac{4}{8}$

inches; outside, $34\frac{6}{8}$ inches; trochanteric measurements nearly equal 33 inches; each leg measurement, $14\frac{7}{8}$ inches; right measurement to transverse femoral line, one inch; left measurement to transverse femoral line, one inch and five-eighths. Impaction of femoral neck into the upper end of femoral shaft. Can walk now without a cane, but has a marked limp. (Patient of Drs. Sullivan and Terhune.)

The following points may now be noted, namely:

(1.) In all of the twenty-one cases above recorded, there was more or less obliteration of the abdomino-femoral—or inguinal—fold on the side of the injury. This was probably due to two causes: (i.) Effusion in front of the injured femoral neck; (ii.) Contraction of the soft parts in front of the femoral neck.

(2.) About one-half of the patients were examined standing up—and when the foot of the injured side was brought down to the floor, the gluteo-femoral fold on that side was seen to be lower than the gluteo-femoral fold on the uninjured side.

(3.) There was out-rotation of the injured limb in all of the above cases. In Cases I. and II. the out-rotation was not marked.

(4.) In all the cases of impaction of the base of the femoral neck, the upper end of the femoral shaft was materially enlarged. There were probably eight such cases.

(5.) In all of the cases of impaction of the top of the femoral neck into the femoral head, the upper end of the femoral shaft was not enlarged. There were probably five such cases.

(6.) The other eight cases could not probably belong to either of the above classes.

(7.) In all of the above cases there was more or less prominence of the outside of the hip, but the gluteal region was somewhat flattened; and generally there was a fusiform enlargement of the upper part of the thigh.

(8.) In 14 of the 21 cases, there was more or less asymmetry of the lower limbs. And this point is important for two reasons: First, It was determined by measuring from the tops of the great trochanters. Second, it agrees with the general fact, that about two persons out of every three, have asymmetry of the lower limbs: Hence, the above measurements from the tops of the great trochanters to the external malleoli were probably correct: *Hence, such a measurement may be recommended as a valuable aid in making a diagnosis of fracture of the neck of the femur.*

It may be remarked, that a fracture of the inner half of the femoral neck could be intra-capsular, that a fracture of the outer half of the femoral neck could be intra-extra-capsular, that a fracture entirely outside of the femoral capsule could not properly be a cervical fracture, and that the fracture ordinarily called *extra-capsular of the neck of the femur* would be more appropriately called a fracture of the base of femoral neck—except in a few cases where the femoral capsule is inserted so far inward on the femoral neck as to give a sufficient space to fracture the cervical bone outside of the capsule. It is not my object now to consider the subject of fractures of the neck of the femur as they relate to the femoral capsule.

I have touched the question of impaction of the femoral neck—I have examined post-mortem specimens of fracture of the femoral neck—(1) in some of which there has been impaction of the base of the neck into the trochanteric part of the femur; (2) in others there has been impaction of the summit of the neck—the femoral brace—into the head of the femur; and in others (3) there has been impaction of the femoral neck into both the femoral head and the trochanters. It is generally not difficult to make a diagnosis of impaction of the femoral neck into the trochanters, on account of the usual expansion or enlargement of the trochanteric region. When certain deformities indicated by the attitude and the measurements of an injured limb—the trochanteric expansion being absent—it may be reasonably inferred that there has been an impaction of the femoral neck into the femoral head. At present I only allude to the fact of impaction of the neck into the head of the femur; at some other time I propose to publish clinical, anatomical and pathological facts to show that this impaction does take place from time to time. My object now is to bring forward such considerations as will aid us in coming to a diagnosis in some of the more doubtful cases of injury to the hip.

In this place it is desirable to tabulate the above measurements, in order to obtain some general averages :

TABLE OF MEASUREMENTS MADE IN TWENTY-ONE CASES OF FRACTURE OF THE FEMORAL NECK.

	Lower Limb.				Leg.		Trochanter Major to ext. M.		Distance to T. F. L.	
No.	Inside. R.	Inside. L.	Outside. R.	Outside. L.	Inside. R.	Inside. L.	R.	L.	R.	L.
1.	32	31 6/8	32	32	13	13 3/8	29 7/8	30 3/8	1 4/8	1
Difference.		2/8		%		3/8		4/8		4/8
2.	29 6/8	30 2/8	31	30 4/8	13 1/8	12 6/8	30	30	1 4/8	1
Difference.		4/8		4/8		3/8		%		4/8
3.	31 6/8	31	32 4/8	31 4/8			30 7/8	31 1/8	2	1
Difference.		6/8		1				2/8		1
4.	35 2/8	35 6/8	36 1/8	36 4/8			33 6/8	34	2 4/8	2 7/8
Difference.		4/8		3/8				2/8		3/8
5.	29	30 4/8	29 2/8	30 6/8	13	13	30 2/8	30		
Difference.		1 4/8		1 4/8		%		2/8		
6.	31	30 6/8	32	32 2/8	13 4/8	14	29 5/8	30 1/8	2	1
Difference.		2/8		2/8		4/8		4/8		1
7.	30 6/8	31	31 2/8	31 4/8	13 2/8	14	29 4/8	31	1 2/8	2/8
Difference.		2/8		2/8		6/8		1 4/8		1
8.	32	31	32 6/8	31 6/8	13 4/8	13 4/8	31	31	1 2/8	3/8
Difference.		1		1		%		%		7/8
9.	30 6/8	32	32	33	13 4/8	13 4/8	31 6/8	31 6/8	1	1 5/8
Difference.		1 2/8		1		%		%		5/8
10.	35 2/8	34 2/8	36 4/8	35 4/8	14 5/8	14 3/8	34 6/8	34 4/8	2 5/8	1 3/8
Difference.		1		1		2/8		2/8		1 2/8
11.	33 4/8	34 2/8	33 4/8	34 4/8	15	14 4/8	33 6/8	32 2/8	5/8	1 4/8
Difference.		6/8		1		4/8		1 4/8		7/8
12.	32 4/8	32 6/8	32 6/8	33	14 4/8	14 2/8	31 6/8	31 2/8	1 2/8	1 5/8
Difference.		2/8		2/8		2/8		4/8		3/8
13.	33 4/8	32 2/8	34 2/8	33 2/8	14 4/8	14 4/8	32	32	1 2/8	2
Difference.		1 2/8		1		%		%		6/8
14.	33 2/8	34 2/8	34 3/8	34 5/8	14 4/8	14 4/8	32 6/8	32 6/8	1 3/8	1 7/8
Difference.		1		2/8		%		%		4/8
15.	31 2/8	31 6/8	32 2/8	32 2/8						
Difference.		4/8		%						
16.	32 4/8	32 4/8	33	33	14	13 6/8	32 2/8	31 4/8	1	1 4/8
Difference.		%		%		2/8		6/8		4/8
17.	29 4/8	30	30 4/8	30 4/8	13	13	29 6/8	28 6/8	Uncertain.	
Difference.		4/8		%		%		1		
18.	33	33 6/8	34	34 4/8	14 3/8	14	32 4/8	31 4/8	1 4/8	2
Difference.		6/8		4/8		3/8		1		4/8
19.	28	28 5/8	28 2/8	29 1/8	12 2/8	12 2/8	27 5/8	27	1 5/8	1
Difference.		5/8		7/8		%		5/8		5/8
20.	31 4/8	31	32 4/8	32	13 2/8	13 3/8	31 5/8	31 5/8	1 4/8	1 1/8
Difference.		4/8		4/8		1/8		%		3/8
21.	33 6/8	34 4/8	34	34 6/8	14 7/8	14 7/8	33 1/8	33	1	1 5/8
Difference.		6/8		6/8		%		1/8		5/8

From the above table may be drawn the following conclusions :

(1.) The average shortening after fracture of the neck of the femur, as shown by the inside measurement, is about $\frac{62}{100}$ of an inch; as shown by the outside measurement, is about $\frac{55}{100}$ of an inch; and as shown by both measurements, is about one-half inch, $\frac{58}{100}$.

(2.) The greatest shortening was one inch and one-half—in case V.

(3.) The least shortening was zero—in case XVI. *But in that case there was an actual shortening of three-fourths of an inch.*

(4.) The average normal asymmetry of the lower limbs in the above 21 cases was $\frac{40}{100}$ of an inch.

(5.) The average shortening of the measurement from the superior anterior spine of the ilium to the transverse femoral line was about one-half inch, again showing that the top of the trochanter major is an approximately accurate point from which to measure.

(6.) In the four following cases the injured limb appeared to be shortened one-fourth of an inch by a comparison of the inside measurements.

In Case I, on account of the asymmetry of the lower limbs, there was the average shortening of one-half inch.

In Case VI, on account of the asymmetry of the lower limbs, there was a real shortening of three-fourths of an inch.

In Case VII, on account of the asymmetry of the lower limbs, there was a real shortening of one inch and one-fourth—in fact the injured limb was longer than the uninjured limb.

In Case XII, on account of asymmetry of the lower limbs, there was a real shortening of three-fourths of an inch. Now, it is an important practical fact, to which I desire to draw especial attention, that asymmetry of the lower limbs complicated the evidence of a diagnosis in these four cases. To neglect this point and base a diagnosis on equality of the ordinary measurements of the lower limbs might bring avoidable disaster and detriment to both the patient and the attending surgeon. Hence, as I have from time to time insisted, it is important to consider the subject of asymmetry in making a diagnosis of fracture of the neck of the femur, because a fracture of the femoral neck may thereby be shown to be probable—and proper treatment instituted—and legal prosecution be prevented.

In nine of the above recorded cases I had the opportunity of making subsequent measurements. In Case I the injured limb shortened about three-eighths of an inch during one year. In Case II the injured limb did not perceptibly shorten during one year. In Case X the injured limb did not shorten any in six weeks. In Case XII the injured limb did not shorten any in eight weeks. In Case XIII the injured limb did not shorten any in eight weeks. In Case XV the injured limb shortened very slightly in twelve weeks. In Case XVI there was no appreciable shortening of the injured limb after six months. In Case XVII there was no appreciable shortening of the injured limb after three months. In Case XX the injured limb shortened about one-half inch in two months. These nine cases afford valuable evidence in regard to shortening of the lower limb after fracture of the femoral neck, during the time of treatment. The average shortening of the lower limb during eight or ten weeks of treatment was less than one-eighth of an inch—a distance so insignificant that, for all practicable purposes, it may be entirely rejected. And since these things are so in nine cases out of twenty-one, might they not be so in the other twelve cases? This question of shortening during treatment of fracture of the neck of the femur can—and ought to be—definitely settled, because it has important practical relations. In fact, there are some points in the above measurements that have some value in the settlement of this important question. The average shortening of eight of the nine cases that were re-measured was $\frac{48}{100}$ of an inch, Case XVI being left out on account of a previous fracture on the other side. Now, the general average shortening of all the cases was $\frac{58}{100}$ of an inch, which is only $\frac{1}{10}$ of an inch in excess of the eight cases in question, *a distance practically insignificant.*

Eight of the above twenty-one cases were only measured on the average of five months after the injury, and show an average shortening of $\frac{79}{100}$ of an inch. This is $\frac{21}{100}$ of an inch more than the general average. And this is only $\frac{3}{10}$ of an inch more than the average of the nine cases that were *remeasured.* And it is only $\frac{2}{10}$ of an inch more than we may expect to find the shortening of lower limb whose femoral neck has been recently fractured. Approximately then we may say, that a lower limb will be shortened $\frac{6}{10}$ of an inch by a fracture of its femoral neck, and that during the treatment the limb will shorten about $\frac{2}{10}$ of an inch more.

In this place it may be remarked that five of the above twenty-one cases were not treated for fracture of the femoral neck, and that one was treated for fracture of femoral neck after three weeks, and that one was treated for fracture of the femoral neck after two weeks.

From a theoretical point of view there need be no surprise that the lower limb does not materially shorten during treatment of fracture of the femoral neck, when we remember and appreciate two plain anatomical facts: First—There are strong facial structures going from the upper end of the femoral shaft obliquely downward and inward to the obturator membrane and the arch of bone below and at the sides of the obturator foramen. These structures act as strong ligaments to prevent the femoral shaft from going materially upward after fracture of the femoral neck—and they are assisted by the contractile force of the obturator externus muscle. Second—Femoral necks that are liable to be broken are probably mostly more or less nearly at a right angle with the femoral shaft. Hence, after fracture of the femoral neck, and during the treatment, the usual absorption of broken and contused bone will be nearly in a direction at right angles to the femoral shaft, so that absorption of the femoral neck would not cause material shortening of the injured limb. And there may be noted an important mechanical and pathological condition, namely, when the femoral brace is driven into the femoral head, but very little shortening can take place, so long as the impaction holds. And the mechanical relations are such that the femoral brace is not likely to be liberated from the grasp of the femoral head, unless severe and unwarranted force is employed to find crepitus.

I am aware that the above conclusions in regard to censecutive shortening after fracture of the neck of the femur are not in accord with the accepted teachings of surgeons, and on this point I desire to make the following remarks:

(1.) It is worthy of note that careful and systematic attempts have not been made to make comparative measurements of the length of the lower limb at the time of fracture of the femoral neck and subsequently. The teachings on this point are in the main founded on the opinions of surgeons.

(2.) The tilting of the pelvis—upward on the injured side—will make a difference of nearly one-half inch in the measurements of the lower limbs in favor of the limb whose femoral neck has been broken; *under such circumstances the surgeon makes the first measurements.* The consecutive tilting of the pelvis—downward on the injured side—will make a difference of nearly one-half inch in the measurements of the lower limbs in favor of the limb whose femoral neck has not been broken; *under such circumstances the surgeon makes the second or consecutive measurements.* In the first place, the injured limb measures comparatively too long; in the second place, the injured limb measures comparatively too short.

In no case of fracture of the femoral neck do I use force to find crepitus. I consider the other evidences of fracture—such as I have above enumerated—as sufficient to come to a practical conclusion. Nor do I give an anæsthetic in order to make an examination. In this connection let me make the following statements:

(1.) Moving the outer fragment when it is in contact with the inner fragment, will generally carry the inner fragment with it, and there will be no crepitus. And when there is impaction ordinary manipulation will not cause crepitus to be felt. Yet crepitus may at times be felt, when there is impaction of the neck of the femur.

(2.) Moving the outer fragment when it is not in contact with the inner fragment, of course will not give crepitus.

(3.) Hence, unwarrantable force will be required in order to get crepitus in many cases of fracture of the neck of the femur. And more than this—*an impacted fracture of the neck of the femur may be broken up by* *severe manipulation, and a patient that would have had a useful limb may be quite completely disabled for life—for an impacted fracture of the neck of the femur is the best setting of the bony fragments that the surgeon can have.*

(4.) In a suspected case of fracture of the neck of the femur, I examine all the witnesses of fracture except crepitus, and if these witnesses agree substantially, I pronounce a verdict in favor of fracture of the neck of the femur. And if there is a doubt as to the correctness of such a verdict, I give the patient the benefit of that doubt, by treating the case as if there was a fracture of the neck of the femur—and then the surgeon receives a benefit from the doubt. But if there is no fracture, the patient has had some days of needful rest, and has had a contused hip well treated.

In this connection let me refer more in detail to case XX., which presents some points of practical importance: Dr. A. S. Clark, for whom I took charge of this case, assured me that the comparative measurements of the lower limbs did not give any appreciable difference in their lengths; and more than this, the patient could get up and walk to some extent; and yet, at the end of two weeks, the neck of the femur suddenly gave way and showed a shortening of one-half inch, leaving the limb quite helpless. When I saw the case, I was able to confirm the diagnosis of fracture of the neck of the femur; and it appeared to me that there was some slight asymmetry of the lower limbs—the injured limb having been somewhat longer than the other; not being sure of this point at the time I did not put it down in my notes of the case. Now I think there can be no doubt that this patients' femoral neck was broken at the time of the fall, and that there was no appreciable shortening, and that the neck of the femur was impacted into the trochanters, and that the impaction was broken up two weeks after the fall by the sudden application of muscular force in an attempt to move. And it may be further remarked, that the necrosis and absorption of broken surfaces of bone so loosened the impaction as to make it easier to break it up and separate the fragments. And if these things are so, then the femoral neck of this patient must have been nearly at right angles to the femoral shaft. And the conclusion must be reached, that a fracture of the neck of the femur may be present, even when there is no apparent shortening of the injured limb. And this is the more important because it emphasizes the fact, that some solution of the continuity of the femoral neck must in the main precede the absorption of the bone, and because it draws attention to the need of carefully *guarding* our statements as to diagnosis and prognosis when we are dealing with injuries of the hip, for there may be a fracture of the neck of the femur, when there is apparently little or no shortening of the lower limb.

Some points in regard to causation ought to be noted:

(1.) One patient fell 35 feet.
(2.) One patient fell 14 feet.
(3.) One patient fell 10 feet.
(4.) One patient fell 7 feet.
(5.) One patient fell 6 feet.
(6.) One patient fell 4 feet.
(7.) Two patients fell 2 feet.
(8.) Two patients fell 1 foot.
(9.) Eleven patients fell on the resisting surface on which they were standing or walking at the time of the accident, that is, the greater number did not fall any distance. The average distances fallen was a little less than 4 feet. Hence, if a person over 50 years of age falls on the pavement, sidewalk, or floor, striking on the hip, that will be sufficient to break the neck of the femur in the majority of instances.

Of the above twenty-one patients, seventeen were females, and four were males. Nine of these cases had fracture of the left femoral neck; eleven had fracture of the right femoral neck, and one had fracture of the left and afterward of the right femoral neck.

Finally, it may be appropriate to make a few remarks on the treatment of fracture of the neck of the femur.

In case XX, where there had been no treatment for fracture till after two weeks, the patient had an extending weight of eight pounds on her limb during two months, in conjunction with a long side splint to support the limb and keep it from out-rotating. The appliances were then removed, and the patient kept in bed for two weeks, when she was allowed to sit up on the edge of the bed, and then in a few days she gained sufficient strength to enable her to get up on crutches. This treatment is such as I usually employ in fracture of the neck of the femur.

In case I, where there had been no treatment for fracture till after two months, the patient was directed to get up on crutches every day, and a well-padded leather splint was applied to the hip on the side of the injury. This splint could not be kept on during attempts at locomotion, because it augmented the pain. It was kept on at night for a few weeks, because it held the muscles in a more quiet state, enabling the patient to sleep better. In a short time the hip splint was discarded altogether, and every effort was made to improve the health of the patient, because any prolonged confinement in the recumbent position would injure the prospects of the patient, and for this reason no extension was advised.

ANTRAL DISEASE—INSTRUMENTS FOR ITS TREATMENT.

BY J. N. FARRAR, M.D., D.D.S.

Between the floor of the orbit of the eye and the apices of the roots of the molar teeth is a natural cavity about the size of an ordinary hickory-nut, termed the Antrum of Highmore, or the superior maxillary sinus. The dome of this chamber (which also constitutes the floor of the orbit, as before said), is very thin, as is also the posterior wall which constitutes the tuberosity of the superior maxillary bone. The outer wall of the sinus, however, which constitutes the basis of the cheek, is about twice or three times as thick, but at most only about equal to that of a strong egg-shell, while the floor of the chamber, owing to its unevenness, varies from a mere film over the apices of the third molar roots to perhaps one-fourth or one-half of an inch over those of the first molar tooth, while the apices of the roots of the third molar may nearly perforate the ossific portion of the floor. When the dental pulps die and decompose, the gas generally poisons the socket about the apices of the roots, sometimes causing alveolar abscess, the contents of which occasionally finds exit into this cavity, causing it to become more or less diseased. After the pain subsides by the escape of pent-up gas, subsequent discharge may naturally enough pass as catarrh, and sometimes be allowed to continue for months or years before its true nature is discovered, in which case the lining membranes and surrounding bony walls may have become diseased by the presence of the obnoxious discharge.

In the past eighteen years, by accidental remarks of people, and while examining to ascertain the condition of the walls of alveolar abscess, through natural as well as artificial fistulæ, by means of a delicate flexible probe, I have found the floor of several antral chambers perforated by the burrowing of the pus, which discovered, to the surprise of myself as well as the patients, unknown causes of bad breath, nasal discharge, and facial aches and pains. Some of these discoveries of hidden disease have been made when drilling to relieve what was supposed to be simply a low form of congestion of the sockets, causing but slight inconvenience.

These complications are sometimes so quiet in their nature after drainage has once been established, that there is little to lead one who knows nothing of the patient's history to a knowledge of the true condition of the parts involved. So much is this so that were I not in the habit of perforating nearly every diseased socket that threatens trouble, some would probably escape notice and perhaps remain through life.

While it is possible to cure antral diseases occasionally without extraction of the offending teeth, yet the danger of failure is so great that I think it does not pay to make the attempt, because if it even be once cured, the possible rekindling of the abscess may occur and again jeopardize the chamber. To remove the cause is a long stride in successful treatment.

In the normal condition of the antrum it has an outlet into the nasal cavity situated a little above the floor of both, so that while the head is upright the antral chamber may be partially filled before it will overflow into the nasal cavity; and if the membranous coverings of the walls of the cavities be swollen, this natural outlet may be partially or even wholly closed. I have had cases that were entirely closed when they came under my care, so that their only means of discharge was by the aid of an aspirator.

Even when this natural (drain) window into the nares is open, the contents of the chamber sometimes become so thick in consistency, that it will not properly drain off, even when water has been forced into the cavity, as has often been shown by the subsequent use of the aspirator. In fact, this is sometimes the only means of ascertaining positively whether the antrum is free from obnoxious matter or not. I have extracted pus of the most offensive character from cases which have been supposed by others to have been cured.

INSTRUMENTS.

Finding no instruments in market that suited me, I made a few after my own notion. The aspirator consists of a nickel-plated framework with glass barrel, and although the action of the instrument is the reverse of that of the ordinary syringe, its manipulation is similar, and is easy and rapid, requiring, when in use, only two or three seconds to evacuate the chamber. (Figs. 1 and 2.)

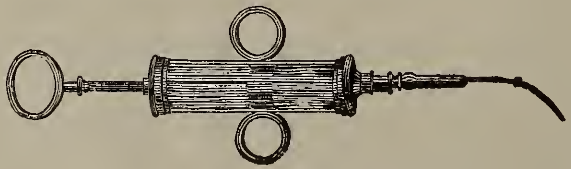

Fig. 1.

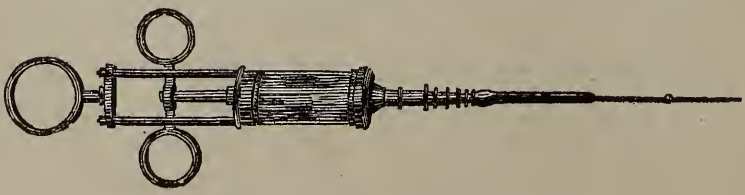

Fig. 2—Farrar's antral aspirator. ¼ diameter.

To prevent irritation, the oval end of the nozzle is closed like the end of an egg, but has several small jet holes on the sides about one-eighth of an inch from the end. This closed end not only enables the nozzle to enter the antral chamber without pain or irritation, but is not liable to become clogged by being in contact with the tissues of walls of the antral cavity, which is generally the case with an ordinary tube.

To prevent injury from violent forcing of the nozzle against the walls of the chamber, or its thin roof of soft bone, there is an adjustable gauge collar soldered to a sleeve which slides back and forth on the body of the nozzle, and is capable of being firmly set at any desired point, on the principle of the universal clamp. (Fig. 3.)

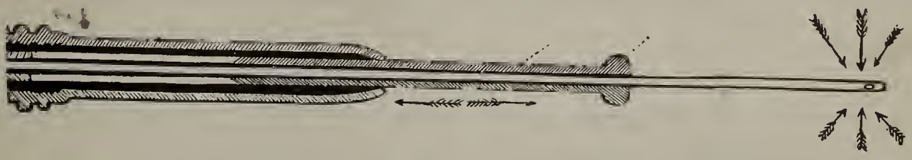

Fig. 3—Sectional view of Farrar's straight adjustable safety tube.

In construction my injecting syringe is similar to the ordinary form found in the shops, but with a nozzle similar to that described for the aspirator, closed at the end with four or more small holes through the sides for spray jets, which, by slight rotation back and forth, while in the act of forcing the fluid into the antrum, thoroughly washes all its walls.

Besides the straight safety tube mentioned, I show you a curved form, which enables the operator to pass with ease otherwise inaccessible routes. The peculiarity of this form lies in the outer sleeve, which, in order to slide around the curve, is made of very thin gold, partially cut at several places along the outer arc of the curve, as shown in Figs. 4 and 5.

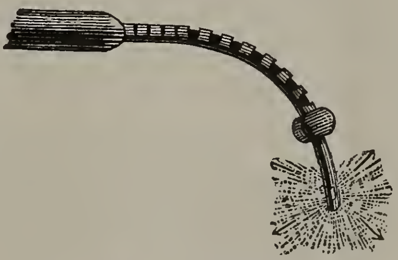

Fig. 4—Farrar's curved safety tube.

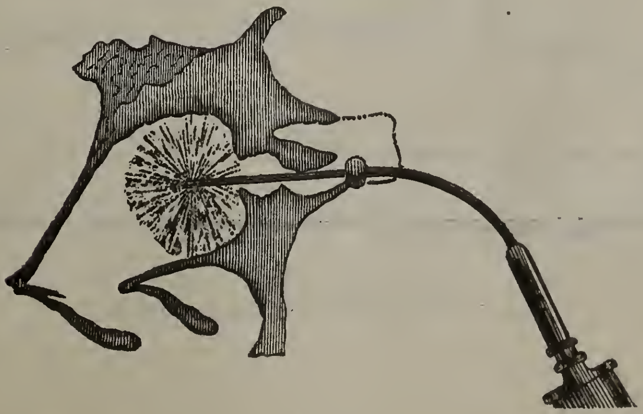

Fig. 5—Sectional view of the antral chamber, showing position of the spray tube while in operation.

In cleansing the antral chamber we should seek to *flood out* the contents by the use of abundance of water by a syringe of a capacity of not less than two or four times that of the antrum. A single jet, or even several, of feeble force, will not do the work thoroughly, and when the pus is of a semi-solid or jelly-like consistency, it will do little or no good. To avoid choking while the operation is being conducted, it is well that the patient's head be not only forward, but to one side (corresponding to the disease).

With these instruments I am enabled to treat a case better, easier and with less pain to the patient, in five minutes, than by the old-fashioned single jet syringe in half an hour. Unless a person has seen these instruments in use, he cannot conceive how quickly and effectually they do their work.

There are cases of alveolar abscess, which, although so extensive as to destroy the ossific flooring of the antral chamber, do not penetrate the lining membrane of that cavity. I have had cases where the contents of the abscess (which had no drainage) was so great, that it had forced this membrane covering the floor up into the antral cavity, so far that it was in contact with the roof membrane, and yet not ruptured. Of course the treatment of such cases should be so conducted as not to perforate this membrane, as it is much easier to effect a cure of the simple abscess.

Occasionally the antral cavity becomes diseased without being caused by alveolar abscess; such cases may require a hole drilled through the bottom of the cavity, for the introduction of the syringe nozzle, but this seems unnecessary in some cases.

Fig. 6 illustrates a pair of nasal tubes, right and left, about eight inches in length, slightly spiral in shape, so as to pass up the nose between the turbinated bones, into the antrum. These tubes are closed at the ends and made similar to the others, and are joined directly to the hub of the syringe or aspirator, or they may be connected by means of rubber tubing about eighteen inches in length. By the use of this tubing there is less liability of causing pain by the jar from the piston.

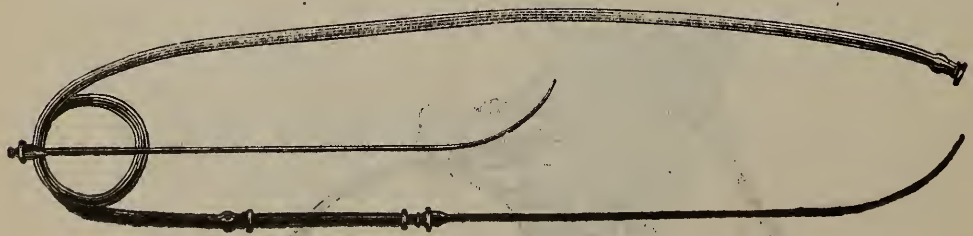

Fig. 6—Farrar's vaso-antral syringe nozzles.

TREATMENT.

After removing the offending tooth, and if no natural opening into the antral cavity can be found, one may be made in the ordinary manner in such emergencies, by means of a drill (not less than one-half of an inch in diameter) passed into the socket of the extracted tooth.

With the patient's head leaning forward, inject through this opening warm water, at the temperature of the blood, and if it does not freely discharge through the nose, it is well to follow this act by the use of the aspirator, removing the contents, which, when held up to the light, will at once show its nature through the glass barrel. After this warm water wash, it may be followed by an injection of a warm solution of: R. Zinc Sulphas, grs. iij.; Morphia Sulphas, grs. iij.; Aqua, ℥ i. This may cause slight annoyance to the patient for a short time, but beneficial results will follow.

As a change, I have derived benefit from the use of diluted Labaraque's Solution. A weak solution of iodine is sometimes valuable in stubborn cases where there is follicular enlargement. There is great difference in patients in the use of different temperatures; some do not feel any inconvenience from cold dressings, while others experience agony by the slightest degree above or below blood temperature. On this account it is well to have all solutions used at this degree, also commencing them weak, and increase in strength as the case indicates, stopping short (as a rule) of causing pain. But as pain is apt to be caused in the earlier stages of treatment, even by the use of water, it should not deter all treatment. Chloride of zinc and water in solutions from three to thirty grains to the ounce, as circumstances require, is excellent in obstinate cases. Aromatic sulphuric acid, in various degrees of dilution with alcohol, has formerly been advocated, but long experience and numerous experiments have led me to believe this medicine is not to be compared with chloride of zinc in value.

To prevent the drain passage through the alveolar process (when one is made) from prematurely closing, the old and well-known tent of cotton may be used; but as this is irritating and filthy, I long ago abandoned it for a much better thing, which I call an antral drain tube.

Fig. 7 represents one variety of my drain tubes detached from its retainer.

Fig. 8 illustrates the apparatus in position on a plaster cast.

Made of platinum or gold. The tube, which is the main desideratum, is about three-fourths of an inch in length, just sufficient to extend about one-eighth of an inch above the floor of the antrum when in position. The end is made the same as those of the syringe, oval and closed with

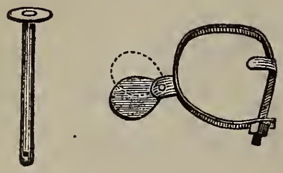

Fig. 7

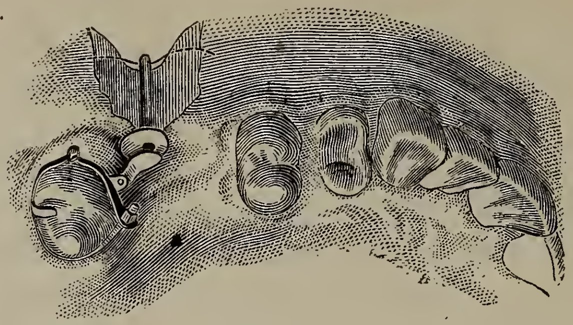

Fig. 8.

holes at the side to allow pus to pass down if desirable. The opposite end of the tube has a flange like the brim of a man's hat, which prevents it from passing too far into the chamber. Although this is mentioned as a tube, I generally fill it with gutta-percha and use it as a plug in order to prevent unpleasant noises by regurgitation of the air in oral manipulations when swallowing.

The tube shown in Fig. 8 is retained in position by a laterally operating valve connected with a fixture about a neighboring tooth, and which plays back and forth on a rivet hinge. This valve also serves as a stopper to prevent food from being forced into the tube.

Various simpler devices may often be practicable to retain the tube. If a cavity be present in the tooth, it may serve as an anchorage for one end of a small piece of wire set in plastic cement like amalgam or phosphate of zinc, the other end of which may be so bent as to enter the lingual extremity of the tube. In absence of all teeth an ordinary suction plate may serve as retainer.

To inject the antrum liberate the tube by forcing the retainer to one side; remove the tube and there will be exposed a smooth round canal, through which the syringe nozzle may be carefully passed without causing irritation or loss of a drop of blood. Inject the case, replace the tube and retainer, and the patient is ready to go on his way within five or ten minutes after entering the office. Some patients can treat themselves with the syringe, while others can actually suck the contents from the antrum and also force liquid up through this canal (by oral manipulations) into the nasal cavity with ease.

These little devices, when properly made, are not only interesting to see, but are of great value to both operator and patient in hastening the cure; for with these diseases much depends upon cleanliness of the part in order to allow Nature (which, after all, is the great physician) all possible opportunities to help herself.

THE MEDICAL SOCIETY OF THE COUNTY OF KINGS.

A stated meeting of the Medical Society of the County of Kings was held on the evening of Tuesday, Sept. 20th, 1881, at 398 Fulton Street; the President, Dr. Charles Jewett, in the chair, and thirty members present.

The minutes of the previous meeting were read and approved.

The following proposals for membership were made: Charles A. Goodspeed, M.D., No. 389 Union Street, proposed by Dr. A. Ross Matheson; John A. Cochran, M.D., 212 Clinton Street, proposed by the same; William Moitrier, M.D., 150 Bushwick Ave., proposed by Dr H. Loewenstein; H. W. Norton, M.D., 465 State Street, proposed by Dr. William E. Griffiths.

THE PRESIDENT stated that, by request of the chairman of the Medico-Legal Committee, Dr. Gray, the report would be received at this point.

DR. REESE arose and said that, in consideration of the fact of the bereavement which the American people are now suffering in the death of the President of the United States, and in consonance with the manifestations of sympathy and sorrow exhibited by all classes in the community, he would move that this Society do now adjourn until the time of the next regular meeting.

The motion was then seconded by Dr. WEEKS, but its consideration was deferred until later in the evening.

DR. L. C. GRAY, in behalf of the Medico-Legal Committee, then verbally reported substantially as follows: He regretted that in regard to the Medico-Legal Committee there was some misunderstanding in the minds of the members of the Society. It is not properly a Medico-Legal Committee in the strict sense of the word. It is a committee organized for the purpose of taking into consideration the question whether it will be expedient for the Society to call a special meeting to be composed of lawyers and physicians for the discussion of subjects pertaining to medical jurisprudence. The Society has had an idea that the committee was organized for the purpose of having referred to it all matters of a medico-legal nature, and have continually referred such matters to it in that capacity. This is not its function. In regard to the special subject for which it was organized, the committee desire to report that, in their opinion, it would not be expedient to call such a special meeting. Judge Pratt is to read a paper before this Society in a month or two, as the speaker understood, and that paper will bring together a sufficient number of lawyers and medical men to answer all the purposes of a special meeting. The committee, therefore, advise that such a special meeting be not called; and then they have ended their functions. But the committee take upon themselves the liberty to further advise the Society that the Medico-Legal Committee be formed into a permanent committee for the consideration of all medico-legal topics coming before the Society; that it be a Medico-Legal Committee in the true sense of the word, and that such committee be appointed by the Chair.

There has been some trouble in coming to a proper conclusion as to how the legal fraternity may be officially conferred with. There is no bar association in this city which is as truly representative of lawyers as the County Medical Society is representative of medical men; but Judge Pratt has informed the committee that there would be no difficulty in calling a special committtee of the bar by which a committee might be appointed to confer with any committee which might emanate from this society.

The Medico-Legal Committee desired to say that it had deferred its report for reasons sufficient to itself, if not to others. During the last spring or winter, after Dr. Sanford's death, it was first organized. At that time, there was a prospect of several trials coming off in this community which were likely to interest medical men and lawyers interested in medico-legal subjects; and your committee deemed it best to defer any measures looking towards the formation of a special meeting until after these trials had taken place, with the hope that, after they had taken place, something of value and interest to the medico-legal community would result.

The report was received and ordered placed on file.

On motion, action upon the suggestion of the Medico-Legal Committee to organize a permanent committee was deferred until the executive session.

Dr. Jarvis S. Wight then read a paper entitled "The Diagnosis of Twenty-one Cases of Fracture of the Neck of the Femur."

It was not discussed.

The Chair declared the following gentlemen members of the Society: Dr. H. B. Bayles, Dr. A. H. P. Leuf, Dr. J. E. March, Dr. L. F. Criado, Dr. C. D. Beasley.

Dr. Segur here called up the resolution of Dr. Reese, and said that he thought it would be eminently proper to defer further business until another meeting. He hoped the Secretary would make a proper minute of this expression of the Society, and of the adjournment at this stage of its proceedings, out of respect for the deceased Chief Magistrate.

The resolution was unanimously carried, and the Society adjourned.

Ἀσκληπιὸς

ὁ Σωτὴρ

Χαρμα μέγ᾽ ανθρωποισι, κακων θελκτῆρ᾽ οδυναων.

Hymns of Homer, No. XVI.

PROLIFERATIONS.

——The American Gynæcological Society meets in New York, Septermber 21st, 22d, and 23d, at the Academy of Medicine. Vol. V of its Transactions is at the Rooms.

——The Atlanta Medical Register is the new name of the *Atlanta Medical and Surgical Journal.*

——The Medical Book Agent.—War has been declared against him by the *Buffalo Medical Journal* (August). The editor calls attention to growing proportions of the impositions of book canvassers. He condemns them as, with rare exceptions, a bad lot, whose rule is arrogance, self-assertion, and persistence, to cope with whom it is necessary either to sink, for the time being, your customary urbanity, and to meet rudeness rudely; or, if you are too yielding and peace-loving for that course, you buy the book to get rid of the man, and with Ziemssen's Cyclopædia and similar works gathering dust upon your library shelves, you meditate how you shall meet the onset of the next infliction. He calls upon the publishers, as the responsible cause of the nuisance, to adopt some other plan of advertising their wares, and advises physicians to refuse to submit to the loss of time and other impositions of their agents. . . . . The editor writes feelingly, and, we suspect, magnifies the ill-behavior of the agent. The lot of the latter cannot be a very happy one, and he probably gets out of the job so soon as he can find a better one; one thing is certain, the same agent seldom comes around a second time. The book-makers are the blameworthy parties. It will be an easy matter to sit down and write to the most intrusive among them, and tell them that your door is closed against their canvassers, and they will quickly find some less vexatious way of effecting the introduction of their publications.

——A NEW "GREEN-ROOM" puzzler may be developed out of the alleged fact that for forty-eight hours after a mosquito has supped on a man, the human blood corpuscles continue to exist in the blood of that insect. Imagine the perplexity of the candidate to whom is addressed the following: "Young man, in what animal, other than man, can be found the red human corpuscle?"

——MILK IN BRIGHT'S DISEASE.—The use of milk as the exclusive diet for patients having the enlarged and fatty kidney has not received the full experience it seems to deserve. At first skim-milk was employed, but subsequently, under the advocacy of Dr. Johnston, of London, pure milk, or milk with only part of the cream removed, was resorted to. Cases are not infrequent where the albumen and dropsical tendency are decidedly ameliorated, and the patient is enabled to pursue some outdoor occupation.

——A SANITARY ASSURANCE ASSOCIATION has been formed in London, under the presidency of an eminent physician, Sir Joseph Fayrer, the grand object of which is the supervision of the drainage and ventilation of dwellings. Acting on the principle that the great enemy to public health is defective drainage, and the terrible absence of all sanitary oversight, this Association takes such steps as will tend to insure its patrons against loss by preventable diseases, just as their homes are assured against loss by fire through companies formed for that purpose.

——THE TYPHOID FEVER GERM.—Klebs, of Prague, reports that a certain microscopic object has been discovered by him infesting the mucous membrane of intestines of typhoid patients. It does not occur in that situation in any other disease, so far as known.

——THE REGULAR MONTHLY MEETINGS of the Medical Society of the County of Kings are held at 8 P.M. on the third Tuesday of each month, at Everett Hall, 398 Fulton Street.

The October meeting will be held on the 18th, at which the following papers will be presented:

Contributions to the study of Infantile Syphilis. By Dr. H. N. Read.

Case of Aneurism of Aorta, probably involving Innominata, treated by Potassium Iodide. By Drs. P. H. Kretzschmar and B. F. Westbrook.

MEDICAL SOCIETY OF THE COUNTY OF KINGS.

OFFICERS AND COMMITTEES FOR 1881.

President	C. JEWETT, M.D., 307 Gates Ave.
Vice-President	F. W. ROCKWELL, M.D., 6 Lafayette Ave.
Secretary	R. M. WYCKOFF, M.D., 532 Clinton Ave.
Assistant-Secretary	J. H. HUNT, M.D., 419 Hart St.
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Librarian	T. R. FRENCH, M.D., 469 Clinton Ave.

CENSORS.

B. A. Segur, M.D., 281 Henry St.
A. Hutchins, M.D., 796 De Kalb Ave.
B. F. Westbrook, M.D., 174 Clinton St.
W. H. Thayer, M.D., 171 Livingston St.
J. D. Rushmore, M.D., 129 Montague St.

DELEGATES TO THE MEDICAL SOCIETY OF THE STATE OF NEW YORK.

(1878 to 1882.)

Drs. J. C. Shaw,
J. D. Rushmore,
C. Jewett,
A. Otterson,

Drs. G. G. Hopkins,
J. S. Wight,
A. Sherwell,
W. Wallace,

Drs. J. Byrne,
B. F. Westbrook,
E. N. Chapman,
F. W. Rockwell.

Chap. XI., Art. 2, of By-laws: "Any Member elected as Delegate to the Medical Society of the State of New York, who shall be unable to act as Delegate during two successive years, shall be considered to have vacated his position as Delegate."

COMMITTEES OF THE SOCIETY.

HYGIENE.

Drs. B. F. Westbrook, B. Edson, N. B. Sizer.

THERAPEUTICS AND CLINICAL MEDICINE.

Drs. J. A. McCorkle, E. R. Squibb, A. Hutchins, B. A. Segur, W. H. Thayer.

OBSTETRICS.

Drs. F. A. Stuart, A. S. Clarke, E. Palmer, W. Wallace, J. R. Vanderveer.

SURGERY.

Drs. J. D. Rushmore, J. S. Wight, G. R. Fowler. A. J. C. Skene,

REGISTRATION.

Drs. W. E. Griffiths,
A. S. Clarke,
J. A. Jenkins,

Drs. W. G. Russell,
N. Matson,
F. W. Rockwell,

Dr. C. H. Potter.

PHYSICIANS' MUTUAL AID ASSOCIATION.

Drs. W. W. Reese,
G. W. Wells,
B. A. Segur,
G. W. Baker,
N. W. Leighton.
A. Hutchins
C. A. H. Szigethy,

MEDICO-LEGAL COMMITTEE.

Drs. L. C. Gray, J. S. Wight, G. K. Smith.

PROCEEDINGS

OF THE

MEDICAL SOCIETY OF THE COUNTY OF KINGS.

Vol. VI. NOVEMBER, 1881. No. 9.

CONTRIBUTION TO THE STUDY OF INHERITED SYPHILIS.

BY H. N. READ, M.D.

Five years ago I read before this Society an article on the above-named subject, containing an analysis and study of fifty-three cases of inherited syphilis, with results obtained.

In the following communication I am enabled to present the results of sixty-four cases. Following the same plan formerly pursued, all imperfect cases have been thrown out, and only those which have been followed up to their termination, either favorably or otherwise, have been considered.

A large majority of the cases were hospital ones, and though favorable for the purposes of diagnosis and treatment, they do not offer a favorable field for the study of the most obscure part of the subject of congenital syphilis, namely the etiology.

Of a large number of children treated by me in their first attack, and in many relapses, I have never seen the fathers. In not a few cases I have never seen the mothers of my patients, and the ignorance or willful deception of the majority of the progenitors of these cases forms an almost insurmountable barrier to arriving at the truth on important points.

Out of much discussion of the subject, and many theories alternately upheld and withdrawn, gradual improvement of our knowledge of inherited syphilis is manifest, and though much yet remains to be proved, yet the accumulated and gradually accumulating experience of careful observers, has advanced many doubtful points to the domain of extreme probability, if not certainty. In the etiology of congenital syphilis, all minor questions as to whether a child inherits syphilis from its father or from its mother, or from both equally, or in different degrees, have gradually merged themselves into one chief question, which indeed contains all the rest, and which, if determined, settles all the others. It is : Can a healthy woman have a syphilitic child? or, in other words, Is not a woman who has a syphilitic child necessarily in some degree syphilitic? I have no hesitation in announcing my belief in the affirmative of this question. Long hinted at, then imperfectly announced, then fully announced, then partially proved, then more fully substantiated, it now lacks but a few more links to make the chain of evidence complete, in the support of this view.

Diday evidently held this view in his work, though unable to prove it.

Mr. Hutchinson, before the Pathological Society of London, if he did not hold this view, went near to prove it (*vide* London Path. Soc. Trans., 1876), and the latest American author on this subject—Prof. Keyes of New York—whose work gives a complete resumé of the subject of inherited syphilis, gives his adhesion to the doctrine, though somewhat guardedly.

I do not here mean to imply that I deny the doctrine that the child may inherit from the father alone. Evidence on this point is conclusive, both in the number of cases reported and in the standing of the observers. Hutchinson, Diday, Caspary, R. W. Taylor, of New York, Hyde of Chicago, have all published cases to show that a syphilitic father has begotten a syphilitic child, the mother showing no symptoms of the disease. Kassowitz, of Vienna, is the strongest advocate of this doctrine, and in an exhaustive treatise has given little room for doubt, it seems, on this subject. It must not be overlooked, however, that some of the best syphilographers have steadily denied this view. Keyes has only seen one case in support of it, and that by no means a conclusive one. I have never seen a case in my practice, though I adhere to the doctrine.

But to resume. It may seem a strong statement to make, that every woman who bears a syphilitic child is herself infected, in view of the numerous cases which come under the observation of almost every practitioner, of apparently healthy women having syphilitic children; but I do not mean to state that every mother of a diseased child has a chancre, or even secondary or tertiary symptoms, in the common acceptation of the terms.

The statement I do make is that every mother of a syphilitic infant, is affected with a variety of the disease, which may or may not be accompanied by secondary or tertiary lesions, but which is *protective* against another attack. Mr. Hutchinson recognizes this fact in the distinction which he makes between "blood syphilis" and "chancre syphilis." Ricord explains it on the so-called "choc en retour principle," *i. e.*, the poisoning of the mother through the diseased fœtus. The proof of this doctrine lies in two points, neither of which has ever, as yet, been controverted. The first is the well-known law of Colles: That a child with inherited syphilis will never infect its own mother, though it can infect a healthy wet nurse. Since this law was first laid down by the acute observer whose name it bears, but two cases have ever been brought forward as exceptions to it. One by Brizio Cochi, an Italian, in 1858, and one by Müller, in 1861. But Kassowitz, who quotes these cases in his work, adds that they are of no value scientifically, as they are neither accurately nor distinctly described.

Since this law was enunciated, therefore, forty-three years ago, no authentic exception to it has ever been recorded among the immense number of cases observed. It may therefore stand as proved. Now if it can be shown that the mother of a syphilitic child can not only not be infected from her offspring after birth, but *from no other source*, the case stands proved.

To fill this last point of proof is exactly what the second of my two points aims at. The second point therefore is, that no case has ever been reported yet of a woman bearing a syphilitic child, who was ever *afterwards* infected with syphilis *from any source.*

This statement, of course, does not stand on a level with "Colles' law," and will require years of observation for proof. No exception to it as yet, however, has ever been noted. Caspary attempted the only positive solution of this question. He found a seemingly healthy woman with a syphilitic husband and a syphilitic child. *He inoculated the woman with the secretion of syphilis without effect.* This is a very strong case. I desire to place the following case of my own on record as proof on this point:

E. H., a healthy nurse maid, sixteen years old, became pregnant by her employer, a gentleman who had contracted syphilis several years previous to this event. She continued well and strong during her pregnancy, and was delivered at full term of a fine looking child, which, however, at five weeks showed roseola mucous patches and snuffles. It was treated and recovered, had two relapses, from which it also recovered under anti-syphilitic treatment. The mother showed no signs at any time of syphilis, at least none that could be detected.

Nearly three years after the birth of her child, she was married to a young man, whom she brought to me for treatment about three weeks after her marriage. I discovered a hard chancre on the frænum of his penis, which he assured appeared only ten days before his marriage, and of the nature of which he was unaware.

He afterwards acknowledged to have had impure connection with a woman of the town some weeks before the appearance of the chancre.

He had had repeated connection with his wife, but a careful examination of her showed neither chancre, mucous patch, nor anything abnormal. The husband afterwards had secondary trouble severely, but the wife, though she has twice aborted, has never shown any symptoms of specific disease, now some sixteen or eighteen months since her marriage. This case may, I think, be regarded as strong evidence.

The woman was repeatedly exposed to the virus of the chancre, with perfect impunity. Neither before nor since marriage has she ever shown a symptom of syphilis, though always under observation and repeatedly examined.

As collateral evidence in support of the two points already brought forward, may be mentioned the numerous cases recorded by Diday, Ricord, Cullerier, Colles, and others, where women having had syphilitic children by syphilitic husbands (themselves remaining free from any symptoms of the disease) have born syphilitic children to *a second husband,* who was an *entirely healthy man.*

An analysis of sixty-four cases arranged with references to the kind of lesion developed, gives fifty-four cases in which the skin was involved. Roseola appeared among the skin diseases in thirty-nine of the fifty-four cases, either alone or combined with some other form. Eczema was noticed in twenty cases, generally in combination with erythema or roseola. Simple maculæ appeared alone in four cases and proved to be the most obstinate, in regard to their disappearance, of any eruptive lesion. One case, a beautiful girl of three years of age, showed maculæ the size of a penny piece, regularly distributed, all over the face, body and limbs, in color a reddish brown. In addition there were snuffles, mucous patches around the anus and vulva; and an enlarged thumb on the left hand.

The child presented a most singular appearance, as the maculæ were distributed through the scalp, as well as elsewhere. Her constitutional symptoms yielded readily to treatment, but the spots remained nine months after her first being brought under my care ; at that time they had faded to beautiful pale golden color, situated beneath the epidermis, and presented a very singular appearance. A final cure was effected under the mixed treatment.

Palmar and plantar psoriasis appeared in thirty-five cases. Pemphigus was seen only once. The child was born with the vesicles largely developed and died shortly after.

Pustular eruptions were seen in eleven cases. Small multiple abscesses, scattered over the body, of the kind described by Vogel, containing only a granular, broken down detritus were seen in thirteen cases. These abscesses are interesting as they are apt to be overlooked, especially if accompanied by any eruption of any kind.

They are of a very low inflammatory grade, rarely giving any indication of their presence to the eye, and only to be detected on pressure. The cases in which they occurred all recovered. The mucous membranes were involved in all of my sixty-four cases. Forty-two cases had mucous patches or condylomata. Every case was affected with snuffles—nasal or naso-pharyngeal catarrh. This system is seldom or never absent in heriditary syphilis, and its existence in a young infant for a length of time, in spite of ordinary treatment, should be regarded with suspicion, especially if excoriations or fissures should make their appearance about the nostrils.

Diseases of the internal organs were diagnosed in twelve cases, the liver being the seat in seven cases (two of which were fatal), and in all of these latter there were present fever, jaundice, vomiting, and purging of bile, and hepatic enlargement. The lungs were affected with a deposit in three cases, presenting the usual symptoms of phthisis. In all three the deposit disappeared and the patients recovered under anti-syphilitic treatment.

No cases of enlarged spleen were diagnosed, though Dr. Gee, of London, has stated them to be present in nearly half his cases. Simple convulsions occurred in one case and continued to recur till the patient reached the age of sixteen months.

This child was supposed to be hydrocephalic, as its head was abnormally large, and the convulsions were thought to be due to this; but a suspicious nasal discharge with spots about the anus led to its being placed on anti-syphilitic treatment, and in a month's time the convulsions disappeared together with the other symptoms, and have never returned, though the patient is now over three years of age.

Convulsions with hemiplegia occurred twice, one case recovering and one dying in a second attack or relapse, at about twenty months of age, the post-mortem showing an extensive blood-clot on the surface of the brain, and a ruptured vessel. Enlargement of the thymus gland was seen only once.

Affections of the bones were seen in sixteen cases. Five of these were cases of dactylitis, bulbous enlargement of one of the phalanges of the hand or foot, first described accurately by R. W. Taylor, of New

York. The others were cases of osteophytes, a variety of syphilitic bone disease which has of late been thoroughly studied and well described by Prof. M. J. Parrot, of Paris. The older writers on inherited syphilis speak of affections of the bones as extremely rare; Diday, indeed, regarding them as almost a curiosity; but the researches of the last ten or twelve years, notably by the observers just named, Taylor and Parrot, have shown them to be by no means rare.

These bony excrescences appear, according to Parrot, on the inner edge of the tibia, along the anterior surface of the femur, on the spine of the scapula, along the anterior and outer surface of the humerus and bones of the fore-arm, and occasionally on the thick and short bones of the body. It is on the cranial parietes, however, that they are most remarkable. In ten of my cases were they seen in this situation, only one presenting growths on the femur.

It is possible that I may have recognized the existence of these osteophytes often on the head and overlooked them elsewhere, as I have been interested in making examinations and measurements of children's heads for some time back, and the apparent enlargement of the cranial vault in many cases, produced by these singular growths, greatly puzzled me until I read Parrot's memoir on the subject, and I have now come to place the syphilitic head as a variety of large heads in infants.

Parrot recognizes two varieties of bony disease in inherited syphilis—the atrophic, and, to quote his expression, osteophytic. In the first description the parts attacked take on the appearance and consistence of fruit jelly. The marrow is glistening, transparent, and in it there occurs a gradual diminution of medullary cells, which may finally even wholly disappear, and there is found only a vasculo-fibrillar mesh-work. When the hard parts are invaded they are rapidly decalcified, the spongy lamellæ literally melt away, and are replaced by large spaces, containing a tissue which has the appearance and histological structure just indicated in the altered medulla.

These changes lead to various affections, some of which may be recognized during life, notably fractures and a certain kind of weakness, termed by our authority "syphilitic-pseudo-paralysis."

I have recognized this trouble in some of my cases, but not the fractures. These cases are often confounded with rachitis. Of the osteophytes Parrot describes two varieties, "the osteod," which may occur at all ages, and "the rachitic," which is never seen before six months of age. The structure of the osteoid variety of osteophytes is thus described: "They are formed of trabeculæ more or less regular and numerous, interlaced and directed perpendicularly to the diaphysis; infiltrated like it with a large amount of calcareous salts, and surrounded by medulla. The microscope shows that they have not a systematic structure like true bone; there are not to be seen in them, as in the latter, osteoplasts regularly disposed in the fundamental substance around the Haversian canals. There are triangular or polygonal corpuscles, recalling the stellate corpuscles of connective tissue, anastomosing by means of processes springing from them with the periosteum, whence they emanate, and with the analogous corpuscles existing in the medullary spaces." The spongy or rachitic form of osteophyte "is formed by tissue which Guérin and Broca have styled *spongioid.* It is nearly white and of a pearly or slightly yellowish appearance. Its structure is essentially fibroid. It is slighly vascular and contains but little marrow." (Parrot, Osseous Lesions of Congenital Syphilis.) These bone changes, it will be readily seen, are destined to play an important part in the after-life of patients, and as an heretofore almost unexplored field, deserve great attention. The hairy scalp in all of my cases was more or less affected, and the hair follicles of the eye-lids. This lesion gives the unpleasant aspect often noticed in syphilitic children, and in spite of treatment they seldom, even when quite large, have the luxuriant hair and large lashes of childhood. Onychia was discovered in nine cases, and was readily cured in all by a removal of the nail. The length of this article will not allow a consideration of wet nursing or of the medico-legal bearings of the subject, though both points are of interest, and full of practical importance to the practitioner.

Treatment.—In this department alone has much of an advance been made. A summary of my cases here given shows a decided improvement in the death rate over the cases formerly reported. In my paper before this body, read some years since, I gave the mortality of my cases of inherited syphilis at nearly twenty-five per cent., and this rate contrasted favorably with most authorities. In my cases reported in this paper the death rate is only a fraction over fourteen per cent.; of the sixty-four children nine died. So marked an improvement in results is due to two causes: First, many of the cases reported in this paper were of a much milder type of the disease than those formerly reported. This happens from the fact that I have treated in many instances several children of the same parents. In these instances the first child is generally the most severely attacked, and these are the cases which formed a large part of my first report. Second and third children of syphilitic parents form quite a proportion of my cases in this communication, and of course the virulence of the disease had been modified in the parents by time, and in many cases by treatment also. But with this allowance made there is still great improvement in the death rate. Of my sixty-four cases, fourteen were children of parents who had produced, previously, syphilitic offspring. Of these none died. The nine deaths all occurred, therefore, in the fifty remaining cases, which gives eighteen per cent. of deaths, a result which is still further improved, when it is remembered that we must subtract at least six or eight cases from the fifty-three of my first paper, which were children of parents who had had, previously, syphilitic children, and among which six or eight cases no deaths occurred, thus raising the per cent. of the death rate very materially for the rest, making nearly twenty-nine per cent. instead of twenty-five, which stands for the whole number reported. The improved results I conceive to be due in the second place, then, to the treatment adopted. This consists entirely in the administration of minute doses of the bichloride of mercury. This plan of treatment, which is very old, has been revived of late years, mainly through the experiments of Keyes, of New York, who has very conclusively demonstrated the tonic powers of this drug, and its property of increasing the red corpuscles of the blood (*vide* Amer. Jour. Med. Sci., Jan., 1876, article entitled "The Effect of Small Doses of Mercury in Syphilis," by E. L. Keyes, M.D., and an essay entitled the "Internal Treatment of Syphilis," by the same author, in the Trans. of the Medical Congress of Philadelphia, 1876). It is not, however, to the tonic effect of the bichloride that its good results are due in syphilis, but to its specific action. I have abandoned the inunction plan and all internal administration of any kind, except the bichloride. I give a mixture containing half a grain of the drug in three ounces of water, with a little syrup, and of this give half a teaspoonful every hour or two to begin with. By this treatment we avoid the dirtiness and greasiness and trouble of the inunction plan—and the time and trouble are no small items with laboring people—and we also shun the disagreeable effects often following the administration of small doses of calomel. Since my first adoption of the bichloride treatment, over four years ago, I have never seen a bad result from its use. My plan is to give it until all traces of the disease have disappeared, and then to give it in "tonic" doses for a month or six weeks longer. The dose is a ninety-sixth of a grain, and giving it in "tonic" doses is only giving it thrice daily, instead of every hour, as at first.

DISCUSSION.

DR. SHERWELL congratulated Dr. Read on his able paper, and was inclined to agree very largely with his conclusions. He thought the point he made about the non-inoculability of the mother from the infant, a good point in verification of his remarks. The speaker was inclined in and for himself to believe that the syphilis of puerperal women was modified in some beneficent way by nature; that they did not have the same regularity of symptoms, the terrible after results which so frequently follows in other cases. The doctor further remarked that he had concluded, from his own observations and experience, that syphilis derived from any other lesion than that of a true chancre, or the orthodox primary sore, was a modified form of syphilis, and was followed by milder or decidedly modified symptoms. This has been frequently brought under his observation, as in cases where relatives, as aunts of a syphilitic infant, have contracted syphilis from the sore mouth of the babe, by a spoon, as in giving or exchanging food with these infants; and after tolerably close watching of the individual, only the very milder or modified symptoms of syphilis have been discovered. He looks upon it as a sufficiently common occurrence for syphilis to be acquired in this way. He has had very recently to watch a case which is accompanied by an induration of the glands, and mucous patches in the mouth of a young lady who had contracted it from the kiss of her lover, who had also a mucous patch. He is inclined to think that this form of syphilis is one of the most common.

The doctor, in conclusion, said that the only criticism upon the paper which he could offer was, that he thought the term osteophite of Carreau was an unnecessary one, as it seemed to answer to the term "node," or periostitic, or osteitic imflammatory result which was so commonly in use and so much better understood.

DR. READ defended the use of the term, and thought that presence of nodes in inherited syphilis was very rare. He had noticed the developments spoken of in taking measurements of children's heads. They are not analogous to developments observed in the heads of adults.

DR. SHERWELL thought the pathological histology will be found to be the same in both.

DR. PROUT did not recollect hearing reference made to the fact that in cases of inherited syphilis the hard palate is observed to be very high. He had observed it, and had come to associate the circumstance with inherited syphilis, and to conclude that in those cases the proper remedy would be the bi-chloride of mercury. He asked the doctor if his attention had been directed to it?

DR. READ had never noticed the condition spoken of by Dr Prout.

CASE OF ANEURISM OF THE ASCENDING ARCH OF THE AORTA, PROBABLY INVOLVING THE INNOMINATA, TREATED BY IODIDE OF POTASSIUM. (PRESENTATION OF THE PATIENT.)

BY P. H. KRETZSCHMAR, M.D., AND B. F. WESTBROOK, M.D.

Aneurism of any of the large vessels of the trunk is considered generally an incurable disease, and even in cases of aneurism of one of the vessels of either of the extremities, surgical treatment is much more promising than internal medication. Several trustworthy observers (M. Bourlland, Balfour, Chuckerbutty, Roberts and others) have of late published their experience in the use of iodide of potassium in cases of aneurism, and, because the way by which iodide brings about favorable results is not as yet determined, and some good authorities deny any beneficial influence of the iodide of potassium on the dilated blood-vessel, it is of the greatest importance to have all clinical experiences, throwing light on this very important subject, recorded.

Dr. B. F. Westbrook has reported two cases of aneurism treated by the use of the iodide of potassium in the January number of the PROCEEDINGS. We present to you to-night a case which is very remarkable, for two reasons, viz.: first, the well-defined and visible effects of the drug on the aneurismal sac; and second, the enormous quantity of potassium iodide which the patient has taken without any perceptible injurious effects on the general system.

Frequently the diagnosis in reported cases of cured aneurism may be questioned, but our case is such a plain one, and the diagnosis of aneurism has been confirmed by such excellent authority, that there can be no reasonable doubt of the nature of the case, or the brilliancy of the result. The question as to the mode of action of the iodide will not be discussed in this report. We simply intend to present the results which we brought about by its use, and call attention to the "tolerance" of the system in this particular case.

Peter J. Demorest, age 50, born in the United States. The patient is a man of powerful frame, about six feet in height, shipsmith by trade. No history of syphilis can be obtained. He is a man of more than ordinary intelligence. He says that he has never been sick prior to the early part of 1880. He has been working as a shipsmith almost every day during the past thirty years. About the latter part of March, 1880, he commenced to be annoyed by sleeplessness and nocturnal orthopnœa. He describes his feelings at that time as of having a "constant rush of blood to his head," and says that he had often to sit up during the night to get his breath. At the same time a troublesome cough, which would not yield to the use of any of the so-called household remedies, led him to suspect some form of pulmonary disease. However, he did not seek medical advice, but continued to work at his trade. These unpleasant symptoms continued until the month of November, 1880, when he commenced to experience severe pains in the right infraclavicular region, extending down the right arm and through the right scapular region. The patient says that these pains were of a very severe character; that they were present alike during the day and night, and that he thought they were of neuralgic origin.

During the month of February, 1881, Dr. James Watt was called to attend the patient. He administered anodynes, and, at the suggestion of Drs. Armor and B. F. Westbrook, put the patient on iodide of potassium, to which he added some digitalis. The iodide was given, we believe, in doses of ten grains four times daily. Before consulting Dr. Watt, the patient observed a peculiar fusiform swelling, which made its appearance between the first and second ribs on the right side of the sternum, and which seemed to increase in size from day to day. A marked burning sensation in the tumor, increased pain in the right arm, extending now over the right side of the neck and head, accompanied the visible sign of aneurismal difficulty. Notwithstanding all this, the patient continued to work at his trade until March 5th, 1881, when he was obliged to leave his shop and give up work. The patient says that the pain which he suffered at times was most intense.

Frequently renewed applications of cold water over the swelling, and the internal use of morphia gave some relief. Dr. B. F. Westbrook saw the case with Dr. James Watt, about the middle of April, when the conditions were as follows:

Severe cough, with slight expectoration, but accompanied by the most intense pain in the side of the chest, right arm, and right side of the neck. Great nervousness and anxiety. A pulsating tumor beneath the right clavicle, extending as low as the second rib, and rising perhaps three-quarters of an inch above the normal level. The pulsations were synchronous with the apex beats. They were accompanied by no bruit, but by a shock indicating the closure of the aortic valve. The double shock was appreciable on palpitation. The apex beat just below the left nipple. No bruit noted. The radial pulses were synchronous, but hyperdiciotic on both sides. The hyperdiciotism more marked on right side. The cardiac pulsations were rapid and very forcible. No hoarseness, no unequal dilatation of pupils. The evidence of compression of the right apex was very slight.

About April 10th the patient was presented and examined by Prof. S. G. Armor, before the medical class of the Long Island College Hospital, and it may help to illustrate his condition at that time when we refer to the statement which was made to Dr. Armor to induce him to present the case to the class at once, instead of waiting for the next regular "clinic day." It was said that the probabilities were, that the patient would not live until the next clinic day, which is once every week. Prof. Armor agreed with the gentleman who had charge of the case, in diagnosing "Aneurism of the Aorta," and also in giving a grave prognosis.

April 20th, Dr. Kretzschmar was called to take charge of the case; these are his notes:

I found the patient, a strong and tall man, apparently suffering from pulmonary difficulty, although he was not much emaciated. He complained much of a very troublesome cough, which, together with a light degree of dyspnœa, prevented him from sleeping at night; his respirations were rapid and shallow, about thirty per minute. The pulse was small and quick. The right and left radial pulse were not synchronous, and there was also a difference in the quality on the two sides, the left being fuller. The patient's eye balls were very prominent. No hoarseness, no œdema, and no fever. On examination a large elastic and pulsating tumor was found in the upper part of the right side of the chest. It occupied the first and second intercostal spaces projecting at its highest point, about an inch and a-half from the surface, and having a diameter of between four and five inches. The right shoulder was somewhat higher than the left, probably caused by the constant use of the right arm. On percussion dullness was found over the entire region occupied by the tumor; even light percussion caused considerable pain. Auscultation revealed no abnormal sounds over the tumor aside from a well-marked pulsation; a soft and slight murmur could be heard with the first sound over the apex. The apex beat could be felt in about the line of the left nipple, in the fifth interspace.

The pulmonary sounds were very normal, with the exception of some large moist rales which could be heard of both lungs, indicating a catarrhal condition of the larger bronchi. The urine did not contain any albumen, nor could any casts be found on microscopic examination. The diagnosis of aneurism as mentioned above was given, and a guarded prognosis made.

The following plan of treatment was laid down: The patient was told to lie in bed or on the sofa all the time, to have a light diet with as little meat as possible, and to abstain from fluids as much as he could. In addition to this he was ordered to take four times a day a tablespoonful of a mixture, each dose of which contained sixty grains of iodide of potassium—240 grains daily.

To produce constant and moderate pressure on the tumor, a Martin's soft rubber bandage was made use of, and applied in the figure of eight manner. The rubber bandage, however, caused so much pain, that after a few days the patient himself made another appliance, which is admirably adapted to the purpose, and which we present to you now for inspection.

After two weeks, no bad effect of the iodide being observed, the dose was increased to 360 grains daily. During the early part of May the size of the tumor seemed to diminish, while all the other unpleasant symptoms were greatly mitigated after large doses of iodide of potassium had been taken for a week.

The perceptible influence of the iodide, and the continued tolerance of the system, induced Dr. Kretzschmar to increase the dose on May 17th to 480 grains (one ounce) daily.

Under the influence of these enormous doses of iodide, the tumor melted away, and the decrease in size astonished the attending physician as much as anybody. The patient gained strength daily, and feeling himself improving, he disobeyed the orders given in regard to rest and diet. He took a walk daily, and kept up and around the room when at home.

June 1st, the patient procured one pound of potassium iodide from some wholesale druggist, and taking 600 grains daily, dissolved in water only, it lasted him for just twelve days.

For the first time while under Dr. K.'s treatment, did the patient, during the early part of June, and while he was taking 600 grains of iodide, complain of such symptoms as are frequently described as iodism. But there was no hoarseness, no coryza, no lachrymation, no eruption of acne, nor any swelling or inflammation of the eyelids; general malaise, a bitter taste in the mouth, and a variety of gastric disturbances were the prominent signs of the effect of the iodide.

On June 12th or 13th the patient was advised to diminish the dose of the potassium iodide to one-half of the former quantity; but it was afterwards found that after that date he did not take his medicine regularly at all. An examination made at that time showed almost complete disappearance of the tumor.

Against our positive instructions, the patient is now again engaged in his former trade; and, though it seems almost incredible, the man who had, less than six months ago, a large aneurism of one of the large vessels of the trunk, is to-day swinging his hammer, and fills an occupation which requires the greatest physical strength and exertion.

September 24th the patient had a very severe attack of malarial fever; his pulse went up to 140 per minute, and the temperature that evening $103\frac{1}{2}^{\circ}$ F. The pulse was remarkably feeble and small, and again a guarded prognosis had to be made. However, he did well, and made a good recovery.

With such an illustration of the beneficial effects of iodide of potassium in cases of aneurism, a physician would not have done his duty were he to omit to give it a fair trial under similar circumstances.

DISCUSSION.

Dr. Sherwell asked whether laryngoscopical examinations had been made partly with a view to ascertaining whether there were evidences of paresis of larynx from pressure on recurrent laryngeal.

Dr. Kretzschmar replied in the negative.

Dr. Sherwell had had several cases in which the first symptoms of aneurismal tumor were detected by a laryngoscopical examination. He had had such a case the day before the meeting. The case was treated by an excellent physician for three months for cough and hoarseness in the expectation that it would get better, but the cough and hoarseness persisted. The case then came to him and he found perfect abductor paralysis of the left vocal cord, which led him to suspect aneurism, and on examination, he discovered aneurism in the arch. Where this persistent hoarseness is present it is a fair inference that the larynx is affected. As to the present case, while he does not doubt the diagnosis from the status of the diagnostician, still he thought while there might be no specific taint discoverable, there was room for doubt in these cases that that might have been a tumor specific in character, either of some of the glands in the neighborhood, or of some of the tissues more or less connected with the parts affected.

The Chair asked whether the urine was examined at the time these large doses of potassium iodide were being administered. It has been noted that such large doses are not altogether free from danger.

Dr. Kretzschmar replied that the urine had not been examined since the first examination at the beginning of the sickness.

Dr. Westbrook remarked in regard to the diagnosis, that while in the case which he presented last winter there might have been doubt in the minds of some who had not seen him at first, in this particular case the symptoms were so unquestionable that there could be no doubt whatever. The patient had that peculiar expansile pulsation which is characteristic of vascular tumors; there was dullness of percussion, intensity of cardiac sound transmitted through the tumor. Also a sign which is regarded by Balfour as highly diagnostic, viz.: that the impulse of the tumor while synchronous with the apex beat was fully as strong as the apex beat itself. In regard to the size of the doses which this man took. He did not know how the doctor came to administer such large doses, but it was probably in the way of experimentation. While the result is good, his opinion was that an equally good result could have been obtained by smaller doses. He would say that at one time while Dr. Kretzschmar was sick, or had sickness in the family, he saw this man for him. It was at the time he was taking these doses, and he noticed that the pulse was exceedingly weak and at the rate of from 130 to 140 beats per minute, and quite feeble, and the countenance was pale and anæmic, like a patient who had lost blood, and he complained of a great deal of debility, which was presumably due to the large doses of the potassium salt. After taking smaller and less frequent doses, these symptoms disappeared. He attributed the subsidence of the tumor more to the remedy than to the pressure exerted upon it.

Dr. Read.—Did the iodide have any effect upon the bowels?

The Patient.—No, sir.

Dr. Read.—Any effect on the urine?

The Patient.—I never noticed any; all I noticed was a little additional urine—very little.

Dr. Sherwell had no longer any doubt that the patient had had aneurism, for he has it still. [He had examined the patient.]

Dr. Kretzschmar remarked that if that means that he did not cure the patient, he would reply that they had not claimed a cure, only a favorable result of the treatment. They admitted that there is dilatation at present, but the size of the sac is very much diminished. It is just the same as your fist—it is so much diminished that it is worthy of report and consideration.

Dr. Read.—The pulse is rapid—has that always been so?

Dr. Kretzschmar.—Always rapid and unequal in size.

Dr. Stuart.—Any increase in the size of what is now discernable there?

Dr. Kretzschmar.—It has not been any smaller than at present. It has been kept the same size as now since the commencement to work, and he went to work against the positive orders of his physicians. Blacksmithing is not a form of labor which will agree with it.

Q.—Is there any specific taint in this man's history?

A.—It was mentioned in the paper that none could be found. Everything denoted absence of specific history; and from the experience with the patient gained during treatment, he felt confident that such a factor can be excluded.

DR. WESTBROOK referred to the influence of iodide of potassium in lessening pain. After the administration of two or three doses, the pain which was present in this man's case was mitigated and entirely ceased. It acts very much better than morphia as far as his experience went in cases of this kind.

THE MEDICAL SOCIETY OF THE COUNTY OF KINGS.

A regular stated meeting of the Medical Society of the County of Kings was held at No. 398 Fulton Street, on the evening of Tuesday, October 18th, 1881, the President, Dr. Chas. Jewett, in the Chair; Dr. R. M. Wyckoff, Secretary.

The meeting was called to order shortly after eight o'clock; about thirty members present.

The reading of the minutes of the previous meeting was deferred until a future occasion.

The following candidates for membership were proposed: James McManus, 155 Seventeenth Street, on behalf of Dr. Stuart; Jesse B. Low, 375 Wyckoff Street, on behalf of Dr. T. P. Corbally; Anna Augusta Forest, 119 Prospect Place, by Dr. E. S. Bunker.

COUNCIL reported acceptance to membership of H. W. Norton, M.D., College of Physicians and Surgeons, New York, 1880; Wm. Moitrier, M. D., Long Island College Hospital, 1881; C. A. Goodspeed, M.D., Dartmouth Medical College, 1880; J. W. Fleming, M.D., Long Island College Hospital, 1880; J. A. Cochran, M.D., College of Physicians and Surgeons, New York, 1881.

The report was confirmed.

THE SECRETARY also reported from the Council the following:

THE COUNCIL being of the opinion that the PROCEEDINGS must be paid for hereafter from some other revenue than that derived from advertisements, recommend that the Society instruct the President to appoint a committee of five, not members of the Council, who shall consider this matter and report thereon to the Society, not later than the DECEMBER meeting.

The discussion of this communication was postponed until the November meeting.

THE CHAIR said that Dr. Squibb had a matter which he would like to bring before the Society in advance of the scientific papers.

DR. E. R. SQUIBB wished to present a subject which he had no doubt would interest the members of this Society.

It is known that for some time past there has been a change meditated in the Surgeon-General's office in the army; that Dr. Barnes is to be retired, and that a new appointment is to be made. There are, of course, several candidates for this appointment, and the medical profession at large are not particularly interested in the candidates, nor with the operations of the Surgeon-General's office proper; neither has this Society, as a part of the profession, much to do with it; but when you remember that for the past sixteen or seventeen years the Surgeon-General's office has been prolific in good to the profession at large—by the establishment and maintenance of an anatomical and pathological museum, than which there is none better in the world; also, by the establishment and perfection of a medical library, by microscopical and other work of a similar nature, and of a high order—the profession at large owes so much to the retiring Surgeon-General, and to those who have aided him, that it seems proper to take some notice of it, and in the manner in which he was about to state. Dr. Barnes and Dr. C. H. Crane, the one the Surgeon-General, the other the Assistant Surgeon-General, came into that office about sixteen years ago. The Medical Museum and the Medical Library were then in a very low condition. Very little had been done on either. The Medical and Surgical History of the War had not been commenced, of course. These gentlemen, in their career of sixteen or seventeen years in that office, have been really the agents of the medical profession at large in placing these things on the basis they now rest. Now the time has come when Surgeon-General Barnes has grown too old to fill this office—having reached the age of sixty-four years—and is to be retired. And it seems particularly appropriate that the Assistant Surgeon-General, who has been associated with him, and has taken all the executive labors of these different professional establishments which have been mentioned upon himself, when the time for promotion comes, should be advanced to the post of Surgeon-General. The profession owes it to itself to ask that when a promotion is made, such promotion be made from the post of Assistant Surgeon-General.

Dr. Squibb here read the following petition, which he desires every member of the Society, who wishes to, to sign:

Brooklyn, New York, Oct. 10th, 1881.

To his Excellency, the President of the United States.

Sir: Knowing the high professional attainments, the unsullied character, and the long, faithful, and successful services to the Government of Colonel C. H. Crane, Assistant Surgeon-General of the United States Army, the undersigned respectfully ask that when a vacancy may occur in the post of Surgeon-General, it may be filled by the promotion of Col. Crane to the office.

Any one, continued Dr. Squibb, can sign that petition. It is free from any political complexion. We all know Dr. Crane's record. We alse know what Dr. Woodward and Dr. Billings have done; but all these things have been accomplished through the executive ability, in a great measure, of Dr. Crane. Dr. Barnes originated, but Dr. Crane was the man who carried out the plans. And now, when the proper time comes along, it is proper that we ask for the promotion of the man who will not ask for himself. Dr. Crane had never said a word to the speaker about this matter, and does not know that his friends are doing this. The petition would be left in the hands of Capt. Charters, in the library room, for signatures of as many as choose to sign it. In conclusion, the speaker expressed thanks for the opportunity and time to present this petition, for he thought it was really a professional matter, in which all had an interest.

The first paper of the evening, entitled, "Case of Aneurism of the Aorta, Probably Involving the Innominata, Treated by Potassium Iodide," by Drs. P. H. Kretzschmar and B. F. Westbrook, was then read by Dr. Kretzschmar.

The patient of Dr. K. was present upon the rostrum for inspection and examination.

Those who took part in the discussion were Dr. Sherwell, Dr. Westbrook, Dr. Read, Dr. Stuart, Dr. Kretzschmar, and Dr. Sullivan.

The second paper, entitled "Contribution to the Study of Inherited Syphillis," was read by Dr. H. N. Read. It was debated by Dr. Sherwell, Dr. Prout, and Dr. Read.

The recommendation in the report of the Medico-Legal Committee, made at the last meeting, was called up and considered. That recommendation was that the Medico-Legal Committee proper be made a permanent committee. It had not properly been a permanent body, although considered and treated as such.

On motion of Dr. Walker, it was resolved that a permanent Medico-Legal Committee of three be appointed by the chair, and that the chair have power to increase the number at any time at his discretion. The President appointed as the Medico-Legal Committee, Drs. L. C. Gray, A. J. C. Skene, J. S. Wight, G. W. Wells, A. Hutchins, and E. R. Squibb.

The obituary notice in the case of the late Dr. Vrooman was ordered on file and printed without being read.

Dr. H. N. Read called the attention of the Society to an imposition which has been and is being practiced upon members of the profession by an Insurance Company that insures children at 25 and 50 cts. a week to the extent of fifty dollars or more. When the child dies, agents go to the attending physician, who is asked to fill up a certificate of death. Should he refuse, they say the beneficiaries of the child will then be deprived of the benefit of the insurance, and more to the same effect. The Doctor contended that the attending physician should be paid for filling out this certificate the same as for filling out other certificates for other insurance companies.

Dr. Bartley said he had made out these certificates without pay, but he did not know "what you are going to do about it." The agent won't pay, and the people can't.

The Chair said the Society was indebted to the doctor, but it seemed to him that this was a matter to be disposed of by the people aggrieved. He did not think it was a matter for official action.

Dr. Jerome Walker remarked that he held in his hand a petition which he desired to read, and afterwards explain. If it should meet the approval of the gentlemen present, he would be pleased to have a motion adopted by the Society endorsing the petition as presented. The copies of the petition present on the table in the ante-room he would be glad to see signed by as many physicians present as was possible.

The petition is as follows :—

To The Honorable Park Commissioners of Brooklyn :

We, the undersigned, physicians of Brooklyn, fully appreciating the value of Coney Island as a health resort for the feeble and sick of our city during the hot weather, do hereby respectfully petition your honorable body:

1st. To take such steps during the coming session of the Legislature as may be necessary to procure liberty to sell, under the restrictions proposed by your Commissioners in Document No. 18, dated February 25th, 1880 (see report), so much of the Park property at Coney Island, lying north of the Concourse, as may enable you to fit up and maintain, for the use of the public, necessary shelters and conveniences for protection and comfort during the warm weather.

2d. To sell or lease to the Brooklyn Aid Society, for the use of its Seaside Home for Children, so much of this park property, on the north of the Concourse, as may enable the Society to carry on its work with greater usefulness in the future. The Seaside Home has already been the means of lowering the death rate of Brooklyn, both by the change of air afforded to thousands of poor children, and by the education of their mothers to an intelligent care of their offspring; and we believe that with such increased facilities as can only be afforded on a more permanent site, these advantages can be extended to still greater numbers, and with much better results—results in which the whole community participates, and for the accomplishment of which all our citizens will earnestly co-operate with you.

NAMES.	RESIDENCES.

It will be noticed, the doctor continued, that this petition has been divided into two portions, and it might seem to some gentlemen present that too large a portion is devoted to the summer work of the Brooklyn Children's Aid Society, and too small a part to the interests of the public at large. He would ask liberty to explain. Most of the members of this Society know the position of the land referred to in the petition, occupying the ground from Vanderveer's to Brighton Beach, and with the land lying *below* the Concourse extending back from the shore line one thousand feet. This property was obtained for park purposes, but the authorities have not been able to make a park of it for want of money, though attempts have been made to obtain money through the city and county, but objections were offered on the ground of increased taxation. A fruitless effort was then made, through the supervisors and Legislature, to sell a part of the property in order to accomplish the object with the remainder. In addition to the thousands of children and women who every year come to Coney Island from the city of Brooklyn, many come from Newark, Elizabeth, Paterson, and other parts of New Jersey. A large number are sent by their physicians for the recuperation of health. Few of these physicians know, apparently, that clean, comfortable, commodious shelters, are *very* rare, *i. e.*, such shelters as can protect feeble women and children from the sun's rays, from the inclemencies of the weather, from hurly-burly crowds, and from unpleasant, and in some instances, disgusting surroundings. Police supervision, *as a rule*, on the western half of the island, is at present a farce; and it is to the west end that the bulk of the lower and middle classes of the people go voluntarily, or are brought by various lines of railroads and steamboats. Here impure milk, poor food, and almost necessary exposure to the heat of the sun, have repeatedly produced convulsions in children, ending sometimes in death. Water closets, except in large hotels or adjoining bar-rooms, are rare, and many a mother with her children has come to the Home because such conveniences were not to be found elsewhere. What wonder, then, that Coney Island has done harm to many of the feeble women and children who were sent there as a sanitary measure! He had reason to believe that if the park authorities shall have the power and money given them to erect shelters and conveniences upon a part of the city's lands at Coney Island, the evils above enumerated will not be found then, and so lives will be saved. Is it not worth while for the physicians to work for this object?

As to the second portion of the petition, the Children's Aid Society proposed, over a year ago, to *buy* a portion of this land. The Society does not beg for the land, but is willing to pay for it a reasonable price, or to lease a portion for a term of years at a just valuation. Recognizing the importance to the public of proper accommodations, the Society intimated that it would maintain at its own expense as a park, part of the property thus bought or leased by it, and connected therewith would be suitable shelters for a *limited* number, where necessary food, including pure milk, can be had at reasonable prices. Such a plan, while it could only embrace provisions for a very limited number of people, still would be an advance in the right direction. Carried out, it would enable physicians to safely recommend Coney Island as a health resort.

The proposal of the Society to buy or lease land was not acceded to, as the Park Commissioners had not authority to so dispose of the property. It is necessary that the

Society should have land of its own, and it is desirable that it should be near the present site. It is not proposed to erect permanent structures on the property now occupied by it, with only one year of the lease before it. It is the intention of the Society to put up buildings when it can do so with safety, which shall be in every way suitable. It is proposed to arrange these buildings, when erected, for the comfort of sick and poor children entrusted to the care of the Society. Physicians can then have their suggestions as to their patients carried out to a greater extent than heretofore. It has seemed wise to those fully conversant with the needs of the people at large, and of the Seaside Home for Children, to present the above petition for the consideration of the physicians of Brooklyn, in the belief that the wishes of a large number of physicians, of all schools of medicine (for the Home cares for all colors, conditions, and creeds alike), would materially influence the members of the Legislature, through the Park Commissioners, to study the necessities of the people. Not to ask for the Seaside Home, as well as for the people at large, would open a way to provide only for a *part* of the people of our city, who need and must have the benefit of the seaside advantages so near our city, during the warm weather. For the above reasons, the doctor added, the petition has been worded as presented.

DR. STUART moved, if it be proper, that, as a Society, it recommend the petition to the favorable consideration of the Park Commissioners. The motion was seconded; but an amendment was offered by Dr. Segur, and accepted, that the consideration of the matter lay over until the next meeting of the Society, and it was so ordered.

DR. GRAY had no objections to laying the question over, and it was so ordered.

THE CHAIR announced that the Medical Society of the County of Queens would be held at Garden City Hotel, on Tuesday, Oct. 25th, at 11 o'clock, A. M., sharp.

Whereupon the meeting was declared adjourned.

Ἀσκληπιὸς

ὁ Σωτῆρ

Χαρμα μέγ' ανθρωποισι, κακων θελκτῆρ' οδυναων.

Hymns of Homer, No. XVI.

PROLIFERATIONS.

——ERRATUM.—It is to be hoped that no one failed to appreciate the bold surgery the types made in Dr. Farrar's paper, page 223, line 3, October issue of PROCEEDINGS. *One-half* should have read *one-sixteenth.*

DR. CHARLES W. VROOMAN was born at Woodstock, Canada, November 7th, 1846. His boyhood was spent in this vicinity, on his father's farm, and here his early education was gained at the village school. Later on he was graduated at the High School, and then commenced the study of medicine under a preceptor, entering the University of Michigan a year later, and graduating from that college in 1868.

Subsequently, he spent a year at the Marine Hospital, in Detroit, and then, after prospecting as far west as Omaha, decided to settle in this city, where he commenced practice in 1869.

Every one knows the experience that a young physician must pass through in the first years of a professional life, and his was certainly no exception; but a fortunate acquaintance springing up with a widely-known and well-established physician, his prospects brightened, and a professional relationship being soon arranged, the future seemed assured.

It was destined, however, that this should not continue; for now that success was in his grasp, a long-cherished wish of his heart, made in his boyhood, to consecrate himself to God's service in missionary labor, asserted itself stronger than ever before, and would not down at the world's bidding.

A struggle was maintained for a little while, short but decisive, and the the spiritual man conquered. His keen, sensative nature could see but one solution; and when the step was taken, to use his own words, "conscience was satisfied." On the 20th of November, 1870, he offered himself to the Board of Missions, and a few weeks later he was appointed medical missionary to Siam.

In February, 1871, he left for his station; and no one ever went forth to do the Master's bidding with greater enthusiasm or with more absolute self-consecration.

He was doomed, however, to a bitter disappointment; for, after arriving at his post of duty, he realized that he was, in more senses than one, alone in this absolute devotion of self to the work, and that element which was so vital to one of his nature, was largely wanting among some, at least, of those who were to be his immediate associates.

Disappointed, therefore, in many of his bright anticipations, he threw himself into his work with an almost careless disregard of health—making long and exhausting journeys into the interior, and constantly exposing himself to attacks of jungle fever, so prevalent and so fatal in that country. Meanwhile the demand upon him as a medical man increased, and his skill in the one operation of lithotomy earned for him justly a very enviable reputation among the natives, who regarded him with a species of superstitious veneration, when they found him able to remove so successfully the cause of their suffering. But at length his physical frame broke down, and serious lung conditions warned him that it was useless to continue longer in the climate.

Reluctantly he acknowledged the fact; and, in February, 1874, returned to Brooklyn, to regain his strength and resume his practice. His health, in a measure, returned, and, in May, 1878, he married Miss Kate Baylis, of this city, in whose constant care and loving companionship he passed several winters in the South, in vain search of the priceless jewel, Health; but the seeds of a disease had been sown from which he never fully recovered; and at length, after all that change of climate could do, or science suggest, he fell a victim to phthisis on the 7th of August, 1881, in the 35th year of his age.

Naturally of a retiring and reticent disposition, he was known to comparatively few of his profession; but those who were fortunate enough to be within the limited circle of his friends, quickly discovered the intrinsic worth of the man, and the true nobility of his character. Faithful to every trust, and the very soul of honor, he leaves behind him in the hearts of those who knew him best, the conviction that, however imperfect and unsatisfactory his efforts may have been to gain what we call success HERE, there was that about the man and his noble purposes that shall win immortal recognition THERE.

A. W. CATLIN, M.D.,
GEO. A. OSTRANDER, M.D., } *Committee.*
PAUL H. KRETZSCHMAR, M.D.,

——THE ADMINISTRATION OF IRON.—The tendency on the part both of prescribers and large drug manufacturers is to combine iron with other tonics, in the form of elixirs, syrups and wines of iron and quinine, iron and strychnia, iron, strychnia and pepsin, and so on *ad infinitum.* The combinations with pepsin are a shameful waste of this valuable remedy, and well calculated to bring it into disrepute. None of the others above mentioned should be used for or in any gastric derangement, except with due regard to time of administration. The most suitable time to give iron is one hour before meals, or four hours afterward.—A. W. PERRY, M.D., in *Western Lancet.*

——CASE-REPORTING NOT DEFAMATORY.—The *Union Medicale* reports that Dr. Legrand, an alienist physician of Paris, was prosecuted for defamation, he having related, at a meeting of the Sóciété Médico-Psychologique, the case of a person who, according to his view, was insane, his account of the case appearing in the journal of the Society. When the person was liberated from the asylum in which he had been detained, he immediately brought an action against the narrator of his case. Dr. Legrand made no reply to this strange accusation, but the tribunal in its judgment exonerated him from all penalty, inasmuch as the report of a learned society, published without any intention to do harm, and purely with a scientific object, does not fall within the application of the law.—*Press and Circular.*

——The Regular Monthly Meetings of the Medical Society of the County of Kings are held at 8 P. M. on the third Tuesday of each month, at Everett Hall, 398 Fulton Street.

The November meeting will be held on the 15th, at which the following papers will be presented:

Report of Committee on Surgery. The Treatment of Wounds. 1. The Process of Healing. By Dr. J. D. Rushmore. 2. The Open Treatment of Wounds. By Dr. J. S. Wight. 3. The Listerian Treatment of Wounds. By Dr. George R. Fowler. 4. The Treatment of Wounds in Gynecology. By Dr. A. J. C. Skene.

MEDICAL SOCIETY OF THE COUNTY OF KINGS.

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B. F. Westbrook, M.D., 174 Clinton St.
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(1878 to 1882.)

Drs. J. C. Shaw,
J D. Rushmore,
C. Jewett,
A. Otterson,

Drs. G. G. Hopkins,
J. S. Wight,
A. Sherwell,
W. Wallace,

Drs. J. Byrne,
B. F. Westbrook,
E. N. Chapman,
F. W. Rockwell.

Chap. XI., Art. 2, of By-laws: "Any Member elected as Delegate to the Medical Society of the State of New York, who shall be unable to act as Delegate during two successive years, shall be considered to have vacated his position as Delegate."

COMMITTEES OF THE SOCIETY.

HYGIENE.

Drs. B. F. Westbrook, B. Edson, N. B. Sizer.

THERAPEUTICS AND CLINICAL MEDICINE.

Drs. J. A. McCorkle, E. R. Squibb, A. Hutchins, B. A. Segur, W. H. Thayer.

OBSTETRICS.

Drs. F. A. Stuart, A. S. Clarke, E. Palmer, W. Wallace, J. R. Vanderveer.

SURGERY.

Drs. J. D. Rushmore, J. S. Wight, G. R. Fowler. A. J. C. Skene,

REGISTRATION.

Drs. W. E. Griffiths,
A. S. Clarke,
J. A. Jenkins,
Drs. W. G. Russell,
N. Matson,
F. W. Rockwell,
Dr. C. H. Potter.

PHYSICIANS' MUTUAL AID ASSOCIATION.

Drs. W. W. Reese, B. A. Segur, G. W. Baker, A. Hutchins C. A. H. Szigethy
G. W. Wells. N. W. Leighton.

MEDICO-LEGAL COMMITTEE.

Drs. L. C. Gray,
A. J. C. Skene,
J. S. Wight,
A. Hutchins,
G. W. Wells,
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PROCEEDINGS

OF THE

MEDICAL SOCIETY OF THE COUNTY OF KINGS.

Vol. VI. DECEMBER, 1881. No. 10.

Report of the Committee on Surgery.

THE PROCESS OF HEALING.

BY J. D. RUSHMORE, M.D.

The Committee on Surgery have chosen as a subject for report this evening, "The Treatment of Wounds." While they are fully aware of the large amount of experience already acquired on this subject and on record in every text book of surgery, they are also impressed with its importance, no better proof of which is needed than the extended and instructive contributions to the subject which were made at the recent International Medical Congress held in London during the past summer.

Your committee, therefore, desire to offer the following report, with the idea of giving their personal experience in the treatment of wounds, and also to elicit discussion and experience from the members of the Society, and thus take a step, at least, in the direction of a truthful and scientific consideration of the essential and important factors in the management of the wounds of the body which any of us may be called upon to treat.

On page 207 of Agnew's Surgery, Vol. 1, occurs the following paragraph: "After examining this subject with no small degree of care, I reiterate the doctrine which I have taught for several years, that nature follows but one method in the repair of wounds, and that is through cells, intercellular substance and blood versels; in other words, through granulation tissue, alike present, whether the wound be small or great, open or subcutaneous." Billroth says, in effect, that however differently wounds may appear to heal, whether they be open or closed, the morphological changes in the tissues are the same in both cases.

Whether we have, therefore, to deal with an incised, a punctured, a contused, a lacerated, a poisoned or a gunshot wound, it is through granulation tissue that the wound finally heals. Whatever affects favorably or unfavorably the morphological elements or the granulation tissue in a wound will promote or retard the healing process; so that the conditions which we are called upon to consider in the treatment of wounds are partly constitutional, partly local, and partly external.

We are perfectly well aware of the importance of taking into account the constitutional condition of the patient when we are called upon to decide as to the advisability of operative interference in surgical cases. We hesitate or refuse to use the knife in old age when we would not hesitate in the young; we take the risk of cutting a child for stone in the bladder, and decline it in the very old. We are successful in saving both life and limb often in a child, when the same effort in the aged would almost certainly result in the loss of limb and life. We are called upon to make the existence of tubercle, Bright's disease, scrofula, advanced syphilis, septic poisoning and even the simple existence of advanced malnutrition, the determining reason for our refusal to make wounds which, these conditions not being present, we should inflict with every prospect of a successful issue; and this, because these conditions affect unfavorably the nutrition of the part under consideration; for the normal healing process requires a normal nutritive process, and this implies a free supply of healthy blood to, through and out of the part wounded. Many times, indeed, we are obliged to operate in spite of some of these conditions, and we choose, as we think, the lesser of two evils (sometimes found, afterward, to be the greater), but always with the fore-knowledge that when these unfavorable constitutional states are present, they will affect adversely the healing process, as, and because, they influence unfavorably the process of nutrition. The general condition of the patient must be taken into account as a very important element in the treatment of all wounds to a certain extent, and especially in those of a more severe character. And attention is called to these facts in this connection, not because they are new, but rather, because they are old, and have stood the test of time and have sometimes failed to receive the consideration which they deserve in the presence of views which are, to say the least, not yet fully accepted by modern surgery.

Besides these constitutional states, which favor or retard the healing of wounds, there are certain local causes for favorable or unfavorable behavior of wounded tissues. The location of the wound has not a little to do with the rapidity of the healing; wounds of the face are well known to unite with great promptness; the upper extremity is a more favorable site for a wound, as regards subsequent healing, than the lower; superficial wounds heal more readily than deep; vascular parts better than parts poorly or not at all supplied with vessels, as tendons, cartilage, etc. Wounds made in the removal of malignant disease heal quickly, as a rule, whether they remain healed or not; and it is a trite remark that the contusion or laceration of the wound edges modifies, to a very great extent, the healing process. Further enlargement of this list is unnecessary.

While these constitutional and local conditions modify the nutrition of the different parts of the body, and consequently modify the healing of the different parts of the body when wounded, especial attention has been directed during the past fifteen years to certain points in the local treatment of the wound itself. Without trespassing on that part of your committee's report which relates to the Listerian and the open treatment of wounds, there are several points to which attention may be called at this time and emphasized by personal experience.

Personal experience leads me to think that Esmarch's bandage is a questionable advance in the methods of controlling hemorrhage during operations. The objections to it are the possible paralysis produced by too severe pressure, of which I have seen three cases, all in the upper extremity, two temporary, and one resulting in a small slough over an excised wrist joint ; and, secondly, the exceedingly rapid filling of the previously emptied vessels with blood when the bandage is removed, resulting in a longer oozing of blood than when a simple tourniquet has been employed, and by congestion of the flap, inviting an over activity in the healing process. The advantage of having parts to be operated upon in an entirely bloodless condition seems sometimes very great as regards ease of operating and in saving blood, but these advantages are more apparent than real. In order to use it with safety and comfort, experience would lead us to make only moderate pressure in applying the rubber band, especially upon nerve trunks that lie over superficially located bony points. The older method of elevating the limb, pressing the blood gently out with the hand, and encircling the limb with a broad rubber band at the point where compression of the arteries is to be made, avoids the dangers and objections above mentioned. In a single case of amputation of the thigh high up, a broad and flat rubber tube was placed tightly around the body, at the level of the umbilicus, and gave entire satisfaction in compressing the abdominal aorta.

After the wound has been made and the operation completed (sometimes before) our first duty is to check the hemorrhage, that there may be as little interference as possible with the coaptation and permanent union of the cut surfaces. My own preference is very much in favor of the ligature in general over torsion, acupressure, cautery, etc.; and my experience has been equally good with a properly prepared catgut ligature, with or without chromic acid, and with a small carbolized silk ligature. Either one can be cut short and left in the wound and give no further trouble. After the hemorrhage has been checked, the next essential point that requires our attention is the most perfect coaptation of the edges of the wound where we desire as prompt and complete healing as possible; of course, exceptions are made in lacerated wounds, and in other cases where we desire healing from the bottom. Experience leads me to think that a more sparing use of sutures and a freer use of adhesive plaster would be beneficial. There should be as little tension on the wound edge as possible. Where flaps come together easily, adhesive plaster will furnish support both for the edge and as far from the border as we choose to make it. We always deplore the necessity of dragging the edges of a wound together by a suture. The suture is useful in proportion as it supports the edge, and harmful in proportion to the tension it produces on the border of the wound. Where sutures are used, my preference is decidedly in favor of the horse hair for general purposes as being easily introduced, unirritating and very easily removed with the least possible irritation to the wound edge. The additional support which is needed for keeping the flaps together can be made better by external dressings than by deep sutures passing through the middle or base of the flaps.

In order that the coaptation of the wound may continue, some kind of drainage must be established in almost all wounds of any magnitude, by horse hair, catgut or drainage tubes of rubber, or decalcified bone. The rubber with the side perforation has seemed to act better than any other. The danger in the use of these tubes is in leaving them in the wound for too long a time; they are irritants at best, less so, however, than pent-up serum, which separates the flaps and irritates at the same time. After the third or fourth day, the wound does better without the tubes than with them.

In the further local treatment, if any external covering is to be placed over the wound, it is of a good deal of importance to put next to the skin a piece of very thin rubber cloth, or oiled muslin or silk, in order to secure a painless removal of the dressing when that becomes necessary. A neglect of this single precaution produces a very considerable amount of suffering on the part of the patient and such an amount of local irritation and consequent congestion as to interfere at times materially with the healing of the wound.

After this, as little disturbance as possible should be made of the part either by frequent changes in the dressing, frequent syringings or disturbance of the parts by motion on the part of the patient; for I am sure I have seen harm done in the healing of wounds, especially in stumps, by the dragging on the flaps by muscular contraction, as the patient begins to move about.

We shall hear freely discussed, as part of your Committee's report, the relative advantages of the open and Listerian methods of treatment. Whatever results are finally reached as based on general experience of many observers, over many years and in many lands, I am fully persuaded that inasmuch as the healing process is a nutritive process, the causes of failure and success in the repair of wounds will be found more in the patient and less in the condition of the air about him, and we shall find our results in the treatment of wounds modified more by intrinsic than extrinsic causes.

THE OPEN TREATMENT OF WOUNDS.

BY. J. S. WIGHT, M. D.

After the arrest of hemorrhage, the removal of foreign bodies, the coaptation of cut surfaces, and the covering of contused surfaces with carbolized lint, the surgeon may obtain the more or less speedy formation of *scar-tissue.* This will constitute *the open treatment of wounds* as differing from Listerism, and will be based on the *principles of Antiseptic Surgery.*

As I treat incised wounds, when coaptation of surfaces is possible, with little or no covering, and as such wounds often require much drainage, and as the primary formation of scar-tissue in such wounds not unfrequently fails, I have thought it expedient to include incised wounds in a general description of the open treatment of wounds.

The point I desire to establish is this: That a plain and simple kind of Antiseptic Surgery, based on a thorough disinfection of the surroundings of the patient, will in the main bring about as good results as the more elaborate and complex kind of Antiseptic Surgery known as *Listerism.*

In this place I desire to make a few statements:

1. The importance and advantages of Antiseptic Surgery have been established beyond a reasonable doubt.

2. Antiseptic Surgery and Listerism are not synonymous: Listerism is a form of Antiseptic Surgery. Taking into consideration all things, is it the best form?

3. No reasonable man denies that Mr. Lister has done more than any other man to establish Antiseptic Surgery on a firm and lasting foundation.

4. Many surgeons in recent years have made their surgical work *clean:* The practical importance of *cleanliness* of the patients' surroundings may be illustrated by the main points of an outbreak of *sepsis* in the Long Island College Hospital during the spring and summer of 1873.

The purification of the infected wards was carried out under my personal supervision as follows: The patients, and everything except the bedsteads, were removed from the infected wards; the straw, some of the bedding and some of the clothing, were burned; the rest of the clothing and bedding were put into a strong solution of carbolic acid for nearly two days, and then were washed and dried; the wards containing the bedsteads were fumigated for two days with the hot vapor of carbolic acid and vinegar; and the walls and floors were washed with a carbolic acid solution. Everything was thoroughly ventilated, and the patients were put back into the wards—*when the sepsis went on the same as before the purification.*

Later in the season I was on duty in the surgical wards, with our fruitless work of purification fresh in memory. The results had been bad, and the prospects were discouraging. Could anything be done to prevent infection and arrest sepsis? It then occurred to me that I had used an antiseptic which might preserve the septic germ for a time, and afterwards evaporate, leaving the germs alive and ready—after their intoxication—to continue their septic work. Surely I had overlooked the surgeon, the interne and the nurse, whose hands were unclean and liable to transplant septic germs into the first congenial soil, such as the waste products of nutrition, inflammation, and repair, which abound in the wards of a hospital. I then proceeded in the following manner: *The hands of the surgeon, the interne and the nurse, and all instruments and appliances, were disinfected by a solution of chlorinated soda before each operation and each dressing of a wound.* In about two weeks sepsis had ceased its work. During this time and subsequently the wounds were dressed—some with carbolized oil, some with sweet oil, some with castor oil, some with chlorinated soda, some with red wash, some with zinc ointment, some with fresh water, and some with dry oakum, and there was no return of the sepsis. A principle had been vindicated, the immediate environment of the patient had been disinfected, and after that a variety of simple means kept up the vindication.

It is a very plain proposition—that nutrition, *repair*, sepsis, putrefaction, and fermentation, have some points in common. There is the continuous motion of particles into, through and out of organic forms—a composition and a decomposition; and the two important questions are:

1. How far can repair take place under disturbed mechanical conditions?

2. How far can repair take place under the influence of invading organic forms?

In fine, the question is: How far can the nutrition-cell resist the attacks of the septic-cell, the putrefacient-cell, and the zymotic-cell? Can we protect the nutrition-cell from the cells of sepsis, putrefaction and zymosis? The anti-septic surgeon says we can to a certain extent. Do some allege that this can be done absolutely? My answer is, *disinfect as far as possible the surroundings of the patient.*

In the meantime let me note two abnormal conditions: (1.) There may be a result brought about by septic germs; (2.) There may be a result in which septic germs have no part. Let me illustrate: A ball contuses the thigh of a soldier; the skin is not broken; it remains impervious to septic germs; the integument is a better *cover* than all the antiseptic gauze in the world. A simple mechanical cause has disorganized the subcutaneous tissues; there has been disturbance of the normal on-going of the work of nutrition. Apparently nothing could be more simple, and yet the results are complex. The thigh "*inflames*"; something unusual takes place in the tissues; the cells in the thigh do not act as they did before the injury; they *deviate* from their normal conduct; some of the cells are killed at once; some are left in a dying condition—and they die; and some are able to continue in their life—under difficulties. The cells environing the injured tissues try to *repair* the damage done by the ball. They in-gest, they di-gest, and they e-gest, under the stress of circumstances, they dispose of their dead and mutilated companions—and what is more they *proliferate.* And there are no bacteria among these dead, these dying, these proliferating cells. The waste products are covered by the integuments, and encased by a wall of "limiting fibrine." There is great general disturbance, nutrition having deviated from its normal standard; in fact, it is not exactly nutrition; the injured cells are acting the part of septics, that is, there is a kind of surgical fever; indeed, there is something like *sepsis* without the *septic germs.* And what is more, this *septoid* condition—or process—may go on so actively as to eventuate in the death of the patient. The spray and the gauze have had no part in this; and if they had, the event would be the same. Ah! do not patients die at times—no matter what their environments as to persons and things? Some patients do indeed die—or else my experience has been in vain.

So great a noise has the carbolic spray made in the world, that one has been at times drawn to the verge of pleading guilty of malpractice, if there has been the least rift in the cloud of anti-septic vapor; in fact, one's surgical feet have constantly tended to be swept from under him by the swiftly running current. And the ever-recurring question has been: What is our line of duty? what is the kind of knowledge that will keep our patients from perishing? Some facts that bear on this subject may be related:

In the spring of 1878, a ship-carpenter, of middle age, who had always been in good health, was admitted to the Long Island College Hospital, with his left popliteal artery torn asunder by a hawser that wound around the condyloid end of the thigh. The foot and leg soon began to mortify. And on the day it was decided to amputate his limb, a Russian sailor was admitted to the hospital, having his right leg so badly crushed as to require amputation at the knee-joint. I operated on the Russian sailor first, having barely tegumentary tissues enough to cover the condyles of the femur. Immediately after, I amputated the ship-carpenter's thigh somewhat above the middle. The limb was greatly swollen, and required a very long knife for transfixion.

The points of interest in these two cases may be stated as follows: (1.) The two cases were put into the same ward. (2.) An amputation of the upper part of the left arm and several serious wounds were in the same ward as these two cases. (3.) The nurse dressed the wounds, the house-surgeon dressed the arm-stump, and I dressed the two thigh-stumps. (4.) The dressing consisted of oakum and carbolized oil: *no water was used.* In a few days the ship-carpenter died of *acute sepsis;* I have never seen a worse case; it was too bad to make a post-mortem examination. The Russian sailor had a good recovery, and the arm-stump and wounds did well. And important cases subsequently put into this same ward did not show any signs of sepsis.

In the spring of 1879 I found septic influences at work in the surgical and obstetric wards of the Long Island College Hospital, and the following plan of disinfection was carried out: A mixture of equal parts by weight of common salt and black oxide of manganese was put into lead-lined iron pans, and moistened with water; the floors were moistened with water; the windows of the wards were fastened; sulphuric acid was poured into the mixture in the pans equal in weight to either of the other parts of the mixture, and the doors were closed and locked. After about fifteen hours the doors and windows were opened and the wards were ventilated and washed. The chlorine had permeated the floors, the walls and the ceiling, and sepsis disappeared and stayed away for the season. And here it is proper to state: That the last patient confined in the obstetric wards previous to the disinfection died of puerperal fever (sepsis). The hospital had not been free from puerperal sepsis for the previous two years. Immediately after the disinfection a pregnant woman was put in the same bed and there confined, *and had no puerperal sepsis whatever.*

In the spring of 1880, a man having a stab-wound through the crico-thyroid membrane, making a puncture into the pharynx, was admitted to the Long Island College Hospital. After some days he died of sepsis. There was pus in the right pleura and the mediastinum, and an extensive infiltration of bad-smelling pus in the retro-trachial region. This patient was a dissolute fellow, whose nutrition had been very much deranged. And in the same ward with this patient there was an amputation of the thigh that received no harm whatever, but went on rapidly to recovery. The flaps were kept on a bed of oakum, and covered with a layer of oakum, *and no water was used.*

And here we come to important questions:

1. I need not urge the importance of removing the waste products of nutrition—not only from the body, but from the habitation—because they are especially poisonous. Who can live on urea, carbonic oxide, and excrement? Can the yeast-cell live on alcohol? No. Neither can the nutrition-cell live on an excretion.

2. It is of the greatest importance to remove the waste products of degeneration, inflammation, suppuration, repair, and sepsis from the body, the bed, the room, and the habitation. This is so self-evident, that I need not insist upon it; and yet, shall I say it? it is so little recognized, that many lives are lost from the poisonous effects of waste products. *To be sure the nutrition-cell cannot safely consume its waste products, when carbonic oxide and urea will cause the body to perish.*

In the presence of such facts, I antisept the patient by disinfecting his entire environment, say the house, room or ward where he is, his bed, his clothes, and his dressings; and, above all, the surgeons and nurses attending him must be disinfected. I maintain the most perfect drainage regarding the waste products of nutrition, inflammation, suppuration and sepsis as most perilous. I remember that there are patients whose constitutional condition is such that they may not survive injuries and operations under any plan of treatment. For such patients it is of the greatest importance that waste products be thoroughly removed from the body. Indeed, it is true that the cells of the body at times go through a kind of sepsis which will end in death, even though all things outside are kept perfectly *clean. To say that such a patient dies because he has not had Listerism is a strange perversion of the truth.*

And now important questions arise: How shall scar-tissue be formed? What obstacles are in the way of forming scar-tissue? What are the indications of treatment of wounds? How shall we carry out the indications?

Scar-tissue is formed in one of three ways: (1.) Fresh surfaces *grow* together in a short time: This is primary union. (2.) Two granulating surfaces coalesce and *grow* together in a little time: This is secondary union. (3.) The wound fills up slowly with granulation tissue: This is union by granulation. And the actual process of forming scar-tissue is the same in all cases.

The obstacles to the formation of scar-tissue are: Filth, dirt, uncleanness and bad hygiene, affecting the patient before and after the injury: The nature and the location of the injury modify the result: The bad constitutional condition of the patient and meddlesome surgery are potential agents in working harm. Who does not know that contused wounds and compound fractures present more obstacles to the formation of scar-tissue than incised wounds and simple fractures?

It may be admitted that some patients, having any kind of wound, put into the purest antiseptic environment, cannot be cured by the most competent surgeon, for the life forces are disturbed by the most simple wound, so that our remedies are of no avail: carbolic spray could not benefit such a case.

It may also be admitted that some patients, having severe wounds, put into disinfected environments, will do remarkably well, when the most simple dressings are applied, not including the carbolic spray and the antiseptic gauze.

Now what are the indications for promoting the formation of scar-tissue?

(1.) The complete arrest of hemorrhage.

(2.) The most perfect rest, both local and general.

(3.) The most complete removal of waste products—bloody serum, purulent fluids, and the excretas.

(4.) The coaptation of fresh or granulating surfaces.

(5.) The proper protection of the part wounded, preventing irritation and keeping the tissues at a proper temperature.

(6.) The most perfect cleanliness of the patient and his environment.

I make it a rule to wash the surfaces of a wound with a watery solution of carbolic acid: In small incised wounds I use nothing but sutures, for the coagulated fibrine makes a good cover; in large incised wounds—after the sutures are put in—I cover the injured part with oakum for protection; in the case of a wounded limb I put the part on a bed of oakum; and when I expect secondary union, or union by granulation, I apply carbolized oil and oakum to the part injured; sometimes I only use dry oakum, or some other simple dressing, and, if need be, disinfect the suppurating part with chlorine water. But I have treated amputations and resections with nothing but dry oakum with the most surprising success, not using any water from the beginning to the end of the treatment.

In brief, these are the simple steps in the open treatment of wounds of all kinds; and the simple principle involved is the removal of every kind of *irritation*, so far as possible, from the nutrition-cells, in order that they may proliferate, and sooner or later join hands across the solution of continuity, forming the only bond of union in their power—scar-tissue. He is the best surgeon who knows how best to promote the formation of scar-tissue, and who rises to the conception of the fact, that there is but one process by which this tissue is formed.

And now let me add some thoughts expressed by two among the greatest of living men —I mean Mr. Keith and Mr. Lister:

1. Said Mr. Keith, at the International Medical Congress, recently convened in London: "True, I did have eighty successive recoveries after ovariotomy; but too many of these came near dying. I found a large number of cases having high temperatures, 105°, 106°, 107° *Fahrenheit*, the evening following the operation, and many cases of renal disturbance. But while I had this remarkable succession of recoveries, that, stopping there, would be a wonderful statistical showing, out of the next twenty-five I lost five: one of acute septicæmia, in spite of the most perfect antiseptic-Lister's treatment; three of kidney disease, and one of hemorrhage, that were undoubtedly due to carbolic acid poisoning. For four months past I have abandoned the so-called antiseptic plan, and I am getting better results; I am having less trouble than when using it. I have felt it my duty, gentlemen, to make these statements because they are true."

2. After these remarkable words from Mr. Keith, Mr. Lister said, in substance, as follows: "I have never admitted that abdominal surgery was the 'touchstone of Listerism,' and I am not sure but that the peritoneum has the ability to take care of its own exudates, and that a skillful and careful operator may, perhaps, dispense with the antiseptic plan. I am not yet ready to give up the spray, but, if simple irrigation or lavation should prove as good, I would say, '*Fort mit dem spray.*' And I am not sure but that before the next meeting, two years hence, I shall have abandoned the spray altogether." As reported by Prof. W. W. Greene, this is the substance of what was said at the International Medical Congress by the great pioneer in antiseptic surgery—a man whose monument should stand by the side of the monuments of Jenner and Harvey.

THE TREATMENT OF WOUNDS IN GYNECOLOGY.

BY A. J. C. SKENE, M.D.

That part of the Committee's report devoted to Gynecology will be limited to wounds of the uterus and perinæum. The wound made in the abdominal walls for ovariotomy, although coming under the gynecological section of surgery, differs in no respect from wounds in general, either in its character or treatment, and may therefore be omitted from this portion of the discussion.

While much progress has been made in the management of wounds of the female sexual organs, especially in late years, it remains a question whether this branch of surgery has attained that degree of perfection which distinguishes some other departments of our science and art. It is even doubtful if wounds of the pelvic organs can ever be treated with a like facility and success as the same conditions elsewhere located.

The reason of this is, that owing to the position of the wounds in question, it is difficult to fully employ antiseptic surgery in their treatment. Much has been accomplished in this respect, it is true, but there are difficulties in the way of employing all the means of modern surgery in the practice of gynecology.

Whatever differences of opinion may exist among men regarding the best means of practicing antisepsis, no rational being can doubt the value of the revolution wrought in surgery by Mr. Lister. The success, therefore, in treating wounds of the sexual organs of women depends, to some extent, upon our ability to employ the means now considered necessary to the healing of wounds in general.

As a basis for what is to follow, and at the risk of presenting facts familiar to every surgeon, the following may be given as the conditions necessary for the healing of the wounds in question.

A condition of the wounded tissues and of the general system favorable to the repair of injuries :

Perfect coaptation and retention of the parts to be united, and protection of the parts from extrinsic and offending agents during and after coaptation. If these conditions are all secured success must of necessity follow. The management of wounds is not a matter of blind chance. The process of repair in living tissues is governed by definite laws which are always the same under identical circumstances. To obtain the conditions necessary to the fulfillment of these laws is often difficult and sometimes impossible; still, the nearer we come to all the requirements the more surely will the desired ends be accomplished.

The first of these conditions, viz., good general health, may be found wanting in many ways and degrees, which are too familiar to require notice, but there are some of these which may be noticed because they are very often overlooked. The preoccupation of the system by some highly taxing function, like lactation for example, and certain deranged states of the nervous system.

These certainly have an important bearing upon the healing of wounds, although little if anything is said in our works on surgery regarding them. In fact, there is good reason for believing that enfeebled states of the nervous system have much to do with retarding the healing of wounds, even where the general nutrition appears to be normal. We frequently hear surgeons say that patients recover from injuries much more promptly when they have courage and hope without fear, but exhausted and irritable states of the nervous system retard the process of repair, although the patient may be indifferent or perfectly satisfied in regard to recovery.

Regarding the unfavorable conditions of the tissues generally met with, the following are the most important: First contusions accompanying wounds caused by parturition.

Lacerated wounds of the pelvic organs often heal promptly if well coaptated immediately after they occur, but no such union should be expected in case the tissues are greatly contused. While this is true of the immediate treatment of wounds sustained during labor, it is pretty definitely settled that operation wounds made during the process of involution, that is, within four or six months after confinement, often fail to unite. From this we learn that while tissues are undergoing involution they are not in the best condition to heal; and also that when involution is delayed beyond the usual time, treatment should be employed to complete the process before undertaking plastic operations.

Scrupulous care is also required in preparing the tissues by making clean, accurate incisions which will give smooth surfaces to the parts to be united. Old scar tissue should also be excluded from all wounds where union by first intention is desired. These are rules in surgery which are well known, but they are sometimes overlooked in practice.

The management of bleeding vessels in these operation wounds is of great importance. All hemorrhage should be arrested before bringing the parts together, because a slight oozing, which would do no harm in a wound to be treated by open dressing, may prevent union in wounds in which drainage should not be employed, or at least should not necessarily be required. This often requires an amount of time which the surgeon reluctantly bestows, but success in treating this class of wounds largely depends upon attention to this matter. Still more, the means used to arrest hemorrhage should be such as will not interfere with the process of healing. Hitherto the means used have been torsion of the large vessels, and for minor bleedings the use of ice or cold water. More recent experience has pointed out objections to these means. Chilling the tissues by cold is injurious, it is said by such an authority as the late Professor William Warren Green, and no doubt the statement is true. It has fortunately been found that hot water is more efficient in controlling hemorrhage and its effects upon the tissues not unfavorable, hence its use as a styptic in these operation wounds is strongly commended. Torsion is also objectionable, because it is less certain to control bleeding than the ligature, and quite as liable to give rise to suppuration. In view of this fact, it may be said without doubt, that the antiseptic ligature is the best means of controlling the vessels in these wounds. Regarding the material to be used as a ligature, it may be said that that which can be enclosed in the wound without giving subsequent trouble, is the thing required. Some recent experience indicates that the Japanese ligature, made of whale sinew, is the best, owing to its being absorbed with great facility.

The coaptation of the tissues by means of sutures requires more than a passing notice.

The success which J. Marion Sims obtained with the silver wire suture led at once to its general use in gynecological operations. There is, however, good reason for believing that the results obtained by that great surgeon depended as much upon his skill in using sutures as upon the material which he used.

To-day we know that it matters little whether silver wire or well-prepared silk sutures are used, provided they are properly introduced. The parts to be united should be brought together and held there without any straining upon the sutures. It is equally important to introduce the sutures so that they will prevent the incurving of the undenuded edges of the parts to be united, and finally, a sufficient number of sutures should be employed to secure uniform retaining pressure at all parts of the wound.

These are facts which every man is supposed to know before engaging in surgery, but in practice a large number of failures are seen because of neglect in regard to these points.

The management of these wounds during the healing process differs somewhat from the modern treatment of wounds in general.

The antiseptic dressings, which surgeons use in some form or other, are difficult of application in the operations for restoring the cervix uteri and perinæum. So fully is that the case, that some of our highest authorities on gynecology make no pretensions to use antiseptic treatment in such wounds, unless frequent bathing of the parts with water and carbolic acid may be called such.

No doubt some of our best operators get good results with this kind of after treatment, but it is more than probable that still better results can be obtained by treatment more in accordance with the rules of antiseptic surgery. Viewed in the light of modern investigation, it appears that the frequent douching of wounds with carbolized water is a practice at least ten years behind the surgery of to-day.

Great harm is often done by this douche in washing away the exudate which is the natural means of protecting wounds, and is therefore an important factor in the healing process. The use of the douche is especially objectionable during the first forty-eight hours after an operation, on this account.

In treating operation wounds of the cervix uteri, an antiseptic dressing can be used in the form of a tampon of borated cotton or marine lint, the latter being preferable perhaps. By this means the uterus is supported and undue tension upon the sutures, from the movements of the patient in bed, or more especially in vomiting after the anæsthetic, is thereby prevented. More than that, the serum which oozes from the wound is promptly absorbed by the tampon and is disinfected, and the parts are protected from the acid secretions of the vagina. This kind of dressing comes as near as can be, and, perhaps, as near as need be, to the kind of antiseptic dressing used for wounds in other parts of the body. The tampon, applied immediately after the operation, may be left in place for forty-eight hours, and then if the parts are healing well no further treatment is necessary. If, however, there is undue inflammatory action and signs of commencing suppuration, the tampon should be reapplied and changed every twenty-four hours, until the recovery is completed.

In justice to a practice which is so generally followed by gynecologists, it should be said here, that when there is suppuration in such wounds, vaginal injections are of great value, but even then the tampon will keep the wound cleaner and more thoroughly disinfected, and, therefore, it is preferable.

In treating wounds of the perinæum, there are many perplexing difficulties in the way of obtaining a proper antiseptic dressing. Here, also, the vaginal douche has been freely used for the purpose, it is said, of removing vaginal secretions, which might irritate the wound and prevent its healing.

Such treatment is generally unnecessary if not injurious. In all operations for repairing old injuries of the perinæum, it is better to first cure all uterine and vaginal diseases which give rise to abnormal discharges. That is the only sure way of protecting the operation wound from that source of disturbance. This, of course, cannot be accomplished in the treatment of lacerations immediately after confinement. Then it becomes a very important question how to protect the perinæal wound from the lochia. Various means have been suggested for this purpose, such as coating the vaginal surface of the wound with collodion, placing carbolized lint or borated cotton upon the inner portion of the wound, and, the most common of all, the frequent use of vaginal injections. It is hardly possible to say, at the present time, which is best. The collodion has not been tried often enough to speak positively regarding it. In using the lint or cotton, there is danger of separating the edges of the wound, the very thing of all others to be avoided.

Perhaps the best treatment (after carefully cleansing the parts and bringing them accurately together), is to let the wound alone for about two days, trusting that during that time it may become sufficiently protected, by a coating of fresh blood and lymph, to resist the subsequent discharges. After the lochia begins to decompose, the frequent use of the vaginal douche is advisable, and should be continued until the union is completed.

In the operation for restoring the perinæum, the vaginal portion of the wound may generally be left alone. It is protected from the air by the anterior vaginal wall, which makes a suitable dressing, providing the uterus and vagina are in a normal condition, as they should be, before the operation is made. If suppuration takes place and pus is discharged into the vagina, it should be disposed of by injections. The outer portion of the wound may also be left without dressing, but it is better to apply lint or cotton upon each side of the sutures; if silver wire is used, or if silk is employed, the lint can be placed over the wound, and retained in place by keeping the limbs together. The advantage of this kind of dressing is that it absorbs any discharge that there may be.

Perhaps the most important point of all in the management of such cases is, to keep from spilling urine upon the wound. The most scrupulous care should be taken to close the end of the catheter in withdrawing it. If this is neglected a few drops of urine will escape from the eye of the instrument, and falling upon the wound will cause trouble.

The nurse should be carefully instructed to use the catheter in this way, and to make doubly sure of cleanliness a little absorbent cotton should be placed between the meatus urinarius and the wound every time that the instrument is used. Notwithstanding all this care, suppuration will sometimes occur, and then the question arises, how to manage this complication. If the suppuration is limited to the track of one suture, that one may be removed and the remaining ones trusted to keep the parts together. It sometimes happens that a cellulitis, which begins in the region of the sutures, extends outwards, and ends in suppuration. This should be treated by a free incision and drainage, which may save the operation. On the other hand, if suppuration takes place between the surfaces to be united, there is very little hope of obtaining union at all by any kind of treatment.

A partial or even a complete success may be obtained in such cases if the suppurative process is detected early, and drainage from the lower edge of the wound is established. This can be effected by loosening one or more of the sutures, and then introducing carbolized silk thread or horsehair to secure the free escape of the inflammatory products.

THE LISTERIAN TREATMENT OF WOUNDS.

BY G. R. FOWLER, M.D.

Primitive man, in all probability, suffered from injury before becoming affected with disease. It is more than likely that the healing art found its first application in the attempt to cure a wound; and yet at the close of the nineteenth century we find the master minds of our profession divided upon the subject of wound treatment, and discussing the causes of the successes and failures of the different methods employed. Procedures diametrically opposed to each other are advocated with equal zeal and enthusiasm, and apparently with nearly equally good results. Adherents of the occlusive dressing of Lister; the modified Listerian method of Von Bruns; the open method; the moist dressing of Bardeleben; all are clamoring for recognition, as representing the method giving the best results; the standard of excellence being presumed to be represented by rapidity of healing and safety to the patient during the process of repair. Von Nussbaum, of Munich, has brought down upon himself the scathing criticisms of his colleagues by demanding that legislative action be invoked to compel the adoption of one method to the exclusion of all others.

The time and space allotted to a paper of this kind are inadequate to a *resumé* of such an important subject as Listerism; my remarks, therefore, will necessarily be limited to presenting for discussion a few main points, and a brief description of the method itself.

In the year 1857, M. Pasteur published the results of his now well-known experiments upon milk fermentation, and the part played therein by atmospheric germs. His observations, briefly speaking, brought to light, among other things, the fact that urine, milk, and other organic fluids, when kept in open-mouthed straight-necked bottles, decomposed much more readily than similar fluids in bottles having their necks bent at such an angle as to prevent, in a measure, the entrance of floating particles of dust, consisting of, or perhaps carrying with them, vegetable or animal organisms ; it being shown that, where these latter were excluded from contact with the fluid, decomposition and putrefaction were delayed for a considerable time. Of course these experiments only excluded such particles as would naturally fall by the force of gravity into the open-mouthed bottles. The researches of Hiller, of Berlin, and others, have somewhat modified the sensation caused by the first announcement of Pasteur's results ; but the fact is undisputed that a flood of light has been thrown upon what had been, until Pasteur's time, considered some of the most impenetrable of nature's secrets.

Following these came researches upon putrid fermentation and the development of bacteria. Of these latter, Professor Von Nägeli's labors on the differentiation of fungi, and the most favorable conditions for their development, are of the greatest value.

Inspired by Pasteur's researches, Joseph Lister turned his attention to the subject of suppuration in its relation to decomposition, and the possible part played by these conditions in the etiology of pyæmia, septicæmia and erysipelas.

When Billroth announced it as his firm belief that fever seldom occurs in a surgical patient in whom the secretions about the edges of the wound remain odorless, the question as to the relation which cause and effect bore to each other, when wound putrefaction and fever occurred coincidently, was very nearly solved. It needed only the suggestion of preventing decomposition and the putrid fermentation of wound secretions, and the whole field of antisepsis would have been opened for immediate research.

In the course of Lister's investigations his attention was called to the remarkable effects of carbolic acid upon the sewerage of the town of Carlisle. This was in 1864. He does not seem to have been aware of the fact that carbolic acid had been for some time in use as a surgical dressing in France and Germany, as well as in Scotland. At the time that Lister was carrying on his experiments, it was charged that the method of occlusive bandaging, together with the use of carbolic acid, were copied from the practice of certain Parisian surgeons. This, however, was very fully disproved; the fact was brought out, however, that the Paris surgeons were dressing wounds by dipping charpie in carbolic acid solution and applying it. To British surgery, however, really belongs the credit of having first introduced carbolic acid as a dressing for wounds. In the year 1842 it was used, in an impure state, in the wards of the Edinburgh Infirmary, Scotland. Following this, in 1854, a Mr. McDougall patented a disinfecting powder consisting essentially of carbolate of lime. This, however, it afterwards turned out, was not the discovery of McDougall, but that of Sir Andrew Smith, then Director-General of the Medical Department of the British Army. There seems, however, to have been no knowledge of the especial antiseptic properties of carbolic acid—certainly not of its influence in arresting fermentative changes in wound secretions—until attention was called to these advantages by Dr. Küchenmeister, of Dresden, who, in 1857, applied it to surgical uses for the purpose of "arresting putrefaction and preventing the development of fungi." This application of carbolic acid antedates the experiments of Lister by seven years, and was really the first suggestion of what since has become rational antiseptic surgery. In 1858, M. Demeaux used a powder consisting of carbolic acid with plaster in the treatment of ulcers, and the practice was claimed by him to have been attended with success. In 1863, Lemaire, of Paris, published an extensive treatise upon the physiological action and therapeutical uses of the phenol compounds. This led largely to the application of these compounds in the open treatment of wounds. He was followed, in 1865, by a volume upon the same subject by Declat, who used carbolic acid in the proportion of 1–10 as a wound-dressing. M. Maisonneuve, who witnessed the effects of this dressing in the practice of Declat, introduced it into use in the wards of the Hotel Dieu.*

What is now known as Listerism, or the special method of treating wounds antiseptically by means of an occlusive dressing, and the thorough disinfecting of everything coming in contact with the wound, even to the atmospheric air, and the principles underlying this method, are now well known to the profession. The admiration of the world has been challenged by that noble and patient worker, who, in the wards of the Royal Infirmary at Glasgow, fourteen years ago, labored for the elucidation of a principle and the solution of a problem under the most discouraging circumstances of frequent failure in experiment, occasional ridicule from his associates and rivals, and apathy of friends. The surgical world, however, has since paid him due and grateful tribute for his silent, patient and faithful work; the principles of antiseptic surgery, mainly through Lister's efforts, have become established upon a rock of faith so strong and enduring that they can never be overthrown; the solution of the problem of how to put into practical shape the principle of an occlusive antiseptic dressing is exemplified in the beautiful carbolized gauze and Mackintosh covering. Lister's faith in the antiseptic principle, and his confidence in the final acceptance as facts of the results of his experiments, triumphed over his own failures and the disparagement of his colleagues; and he stands to-day the honored and respected leader in a line of investigation which bids fair to completely revolutionize the scientific world. Indeed, Volkman declares, in unequivocal terms, that "never has a discovery been made in surgery which has even approached this in its benefits to humanity in general." These are strong words from the veteran Halle professor, but they awaken echoes of approval from almost every conscientious surgeon of the present day.

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*At a recent meeting of the New York Academy of Medicine, Declat claimed priority over Lister in the introduction of antiseptics, and particularly carbolic acid, in the treatment of wounds. He based his claims upon a publication which he sent to Sir J. Y. Simpson in 1865, who, upon the strength of Declat's assertions, accused Lister of plagiarism in claiming the discovery. No one, however, doubts Lister's honesty in the matter. What is now known as the Listerian method differs so materially from Declat's in essential details, that the claim of the latter can never detract from whatever merit resides in the former.

Fifteen years ago the dread scourges, erysipelas, pyæmia and septicæmia, reigned supreme in almost every general hospital in Continental Europe. The surgical clinic of Von Nussbaum will serve as an illustration. Here all cases of compound fractures, and nearly all patients operated upon, were attacked with pyæmia. Strong efforts were made to close the wards of the hospital and erect a new building. In 1872 hospital gangrene appeared, and such fearful ravages did it make that two years later, every effort having in the meanwhile been made to arrest its progress, it was found that fully eighty per cent. of all wounds and ulcers were attacked with it. Nearly every patient suffered, in a greater or less degree, from erysipelas, and a true union by first intention was never seen coming from this clinic prior to the year 1875. One can scarcely conceive of a more horrible state of affairs. Every method of disinfection, every variety of wound treatment were tried without avail, until rigid Listerism in every case was religiously enforced. Then and then only did the above deplorable conditions disappear, and that as if by magic.

Not alone in hospital, but in private practice also, surgeons were, as a general rule, compelled to qualify every otherwise favorable prognosis relating to a solution of continuity of the soft parts with a statement regarding the possible occurrence of erysipelas, or some form of blood-poisoning. In those days the surgeon who made a wound was very much in the position of the itinerant lithotomist of olden times, who, upon being reproached because of the dreadful mortality following his hap-hazard method of stabbing the perineum, replied, "It is my duty to get the stone; the patient is in God's hands for cure." The remark of Göethe's Mephistopheles, "Ihr durchstudirt die gross und kleine Welt, um es am Ende geh'n zu lassen wie's Gott gefällt," might well have been applied to the surgery of as recent a period as twenty-years ago, so far as the treatment of wounds was concerned. Now, however, this is in great measure changed. In his enthusiasm, Von Nussbaum has recently remarked, "With these (accessory traumatic) diseases suppressed, the door of the surgical sick chamber is barred against the Angel of Death."

That causes other than those directly referable to Lister's efforts have contributed to the present successful methods of treating wounds no one will deny. Long before the introduction of carbolic acid and other antiseptic agents, in fact, since the introduction of Chassaignac's method of drainage by means of India-rubber tubes, surgeons have been steadily drifting on towards the establishment and promulgation of that gospel of cleanliness which may now be said to be fairly inaugurated. Although some deny the advantages of a special dressing such as Lister uses, and others have abandoned the spray, yet few, if any, still hold to the opinion of the English surgeon, who declared that for his part he deemed "the pure waters of Damascus as potent for good in their purifying influence as all the carbolized waters of Israel."

Since the earliest times the value of any method of wound treatment was gauged by the power of that method to prevent the occurrence of those sequelæ of traumatism, now grouped together under the general heading of accessory surgical diseases. These include erysipelas, septicæmia, pyæmia, lymphagitis, hospital gangrene, etc. If this criterion be applied to the method of Lister, no one will deny, in the face of recent developments growing out of the experience of Von Nussbaum, Volkmann, Hueter, and other Geman surgeons, that a very great advance, to say the least, has been made. The former declares that by this method a recent wound may surely be prevented from disaster; and when it is recognized the world over that the destiny of the wounded lies nearly altogether in the hands of him who first treats the patient, the responsibility of the surgeon is very grave. This responsibility is in striking contrast to that which the surgeon assumed in former times, when a wound, even if treated correctly to the minutest detail by the most improved means, was liable to end fatally.

Assuming that atmospheric air, even in its purest state, is frequently the bearer of agents causing putrefaction, and that the lodgment of these agents upon a wound will set up putrefactive changes, together with a further development of the putrefactive material itself, and that this putrefaction and decomposition of the wound secretions in their turn are followed by the almost invariable development of the much dreaded accidental wound diseases, Lister has devoted his attention principally to the securing of the wound against the invasion of such agents. * He has simply

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* Magnin, in a recent work upon the subject, concludes that the exact part played by bacteria in fermentations, putrefactions, and surgical lesions cannot yet be certainly defined.—" *The Bacteria, by Dr. Antonie Magnin. Translated by George M. Sternberg.*"

looked with suspicion upon the whole atmosphere, the water used in irrigation, the hands of the operator, the instruments, the breath of the surgeon and his assistants; in fact, everything which by any possible means could come in contact with the wound—as being possible carriers of contagion, or of agents active in initiating putrefactive changes, and has governed himself accordingly. The undoubted proof that it is not atmospheric air, as such, which causes the dread sequences so often met with, is sufficient for his practical mind; the question as to whether there are poisonous and innocent germs commingled in the same breeze from heaven matters but little to him. He has taken measures to exclude everything likely to prove injurious to the welfare of the wound, and he may well rest content, so far as the wound itself is concerned.

It is hardly necessary to call attention to the fact that, strict Listerian precautions having been adopted in a given case, the responsibility does not end here. In injuries causing serious disturbances of nutrition, where large nerves and important tissues are crushed and bruised, and a large amount of blood is effused into the cellular tissue, or blood clots exist, the consequences may be grave, even if the agents causing putrefaction are prevented from gaining a foothold in the wound. Constitutional taints may bring about a fatal issue, and he would be narrow-minded indeed who did not take into consideration the fact that faulty hygienic conditions may, and frequently do, stand in the way of the proper performance of those actions which are essential to the proper maintenance of the organism in a condition of health, and for the proper nutrition and repair of tissue. Upon this point Erichsen* remarks: "Is there no fear that, in some of the modern methods of treating wounds, we are in danger of expending all our precautions in the prevention of the local, and of ignoring the risk of constitutional infection?" We certainly cannot afford, because of this generally acknowledged improved method of wound treatment, to throw away the valuable experience of the past. The fact is that we have to deal, in the treatment of wounds, with dangers other than those attributable to the decomposition of their secretions. For example, in a compound comminuted and complicated fracture, such as one meets with as the result of railway accidents, with extensive larcerations of the muscles and with torn nerves and blood-vessels, Listerism cannot do away with the imperative necessity for amputation. Wounds occurring in a scrofulous subject, or one the victim of acquired or hereditary syphilis, will not be likely to do as well, Listerism or no Listerism, as a wound of the same character occurring in an otherwise healthy subject. The Listerian dressing cannot charm away dyscrasiæ nor individual bad habits. It may seem superfluous to call attention to these matters, but one reads occasionally of failures of Listerism when a careful inquiry would probably reveal the fact, providing that this method of treatment had been conscientiously and intelligently carried out, that the dressing had accomplished all that could have been reasonably expected of it, and that the failure was due to some cause entirely unconnected with the Listerian method. And how frequently it happens that the method has not been fairly tried before condemnation. A glance over the literature of wound treatment of the past ten years will bear me out in the statement that the most bitter opponents of Listerism are either among those who have never given it a trial, or have used it in such a manner, by totally disregarding some essential details, as to invite failure. On the other hand, those who have faithfully tried it have recognized the principles underlying the method, and instead of occupying themselves in denying its usefulness and belittling its originator, have striven to determine which of its various parts are vital to its success, with the view of simplifying its complexity by eliminating from the procedure all non-essentials.

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* British Medical Journal, August 6, 1881.

As an illustration of what may occur to frustrate the surgeon's purposes and intentions, even when every precaution is taken, I will mention the following: During the past summer there came under my care a lady who had been operated upon in one of the best of the many good hospitals in the adjoining metropolis. The entire breast had been removed for a scirrhus growth. The patient was a buxom, hearty woman of forty, who had consented to an early operation. There was good reason to believe that such a case would do well under any method of treating the wound. As far as I can learn from the patient, every precaution of Listerism, including the spray, was taken during and following the operation. The wound was dressed Listerially, and as the method was then on trial in the institution, and the operator one of the most conscientious of surgeons, I can well believe that no pains were spared in the case. But the wound did not do well, and in spite of every effort the line of incision would not heal, although bridged over in several places; sinuses burrowed deeply and extensively beneath the pectoral muscles, the cellular tissue in the neighborhood became infiltrated, and the patient's general health was rapidly breaking down, a low type of irritative fever supervening. In this condition she left the hospital and returned to her home. When she came under my care, the Listerian dressings had been abandoned, Peruvian balsam and lint, with firm compression, having been substituted. A careful examination of the sinuses revealed the presence of some foreign substance, which, upon being withdrawn, proved to be an India-rubber drainage tube, four inches long by three-eighths of an inch in diameter; this had been left at the bottom of the original operation wound, and had been overlooked by the dresser in the hospital. To be sure this may be characterized by some as an extreme instance of the grossest carelessness, and would not be likely to happen outside of a hospital where underlings are entrusted with the dressing of wounds; yet, in this instance, there is reason to believe that at least ordinary care and watchfulness were bestowed upon the after-treatment. For the time being, however, it is more than likely that the behavior of the wound did not encourage, in the mind of the surgeon in charge of the case, an increased faith in Listerism

The magnificent run of successful cases of ovariotomy in the hands of men like Spencer, Wells, Keith and Hegar has for years excited the wonder of surgeons throughout the world; and these experiences are often alluded to by those who either disbelieve entirely in antiseptic surgery, or only give it a qualified endorsement. They are frequently quoted as giving results that can be scarcely equaled by any special method of wound treatment involving special precautions, measures and dressings. But let it not be supposed that the successes of these men are gained without detailed management. Take, for instance, the operation of ovariotomy, as performed by Hegar. The operator, his assistants and nurses are all required to take a warm bath and to put on an entire new suit of clothes. Every person present at the operation is compelled to give, upon his word of honor, the assurance that he has not visited a dissecting-room, made a post-mortem, or treated a case of contagious disease for three days prior to the operation. These and numberless other precautions, including the free use of chloral solution in various ways during the operation, constitute a method of management fully as complicated in its details as that of Lister. Although the results are highly instructive and interesting, yet they have been obtained by manipulations fully as inconvenient and otherwise objectionable as the strictest Listerism, and lacking the safety of the latter method.

At the recent International Medical Congress a great deal of surprise followed the renunciation by Keith of the method of Lister, and his avowal that in his hands its employment had been followed by deleterious effects after the operation of ovariotomy. When attention is called to the fact that Keith had been a remarkably successful operator before he adopted Listerism, and that this record had been gained by methods as precise as those of Hegar, it would seem that improvement would be next to impossible. Yet the first series of cases operated upon after his adoption of the Listerian method showed that a marked improvement had taken place in the results. In a subsequent series of cases of the same operation in which strict Listerism was likewise followed, a higher rate of mortality occurred; this was declared to be due to the evil influence of the carbolic acid. Until further analyses of these two series of cases are laid before the profession, it will be as competent and just for the advocates of Lister's method to deny that the higher rate of mortality in the last series was due to the antiseptic agent employed, as it was for the opponents of Lister to assert that the first series were not influenced favorably by his method.

The most unjustifiable, as well as ridiculous charge yet brought against Listerism, is that it has wrought injury to conservative surgery in that it has led to the introduction and very frequent performance of a class of operations commonly known as "operations of convenience"; these operations, when performed with the strictest antiseptic precautions, being accompanied with so slight a risk as to lead to what some would denominate reckless ventures. This charge, however, only reacts upon those who make it; in truth it amounts to a virtual endorsement of the method, for no one would take advantage of the immunity from danger thus secured, but on the contrary would make use of it to preserve limbs which otherwise would have been sacrificed under other treatment. In cases where the older methods proved unavailing, and confidence had been lost in the resources of our art as applied to these cases, a new venture which restores confidence by giving immunity from danger is surely to be hailed as a new triumph rather than merit rebuke.

Those who argue that, were sepsis as effectually prevented by the Lister dressing as is claimed, drainage, so strongly insisted upon as a part of the method, would be entirely unnecessary, have certainly fallen into error through a failure to grasp the ideas of Lister in this matter. If no other harm than the danger of decomposition of accumulated wound secretions was to be apprehended, then drainage would be superfluous. But unfortunately other evils result from this accumulation, and drainage is imperative, not only to prevent sepsis, but to counteract the damage resulting from pressure caused by the retained secretions. A rise of temperature will take place when the drainage is insufficient, not because the secretions are necessarily in a septic condition, but because the efforts at repair are brought to a stand-still by mechanical pressure upon the delicate connective tissue vessels. For the successful management of wounds it becomes absolutely necessary for the surgeon to take cognizance of the fact that dangers other than sepsis may interfere with rapid and safe healing. Antiseptic treatment will only avert the more serious consequences; other indications remain to be fulfilled, and the necessity for free drainage is one of them. It is believed that one great advantage of the open method resides in the perfect drainage resulting from an employment of this method, and the perfect rest of the parts enjoined by those who practice the open treatment.

The advocates of the different methods all agree that at least these two latter indications must be fulfilled, namely, perfect drainage and complete rest of the parts. Add to these the necessity for antisepsis and all that is claimed for the Lister dressing will have been allowed as indispensable. The brilliant series of major amputations by the late lamented Callender are often quoted in support of the open treatment. An inquiry into the means employed, however, reveals the fact that if they were not treated upon a strict antiseptic plan, the method employed was a very close approximation to it. The drainage was most effectually accomplished by leaving the flaps apart; rest was secured by the use of his amputation splint and a certain amount of antisepsis made available by penciling the surface of the wound with a solution of carbolic acid. Aside, however, from the employment of strictly antiseptic agents, it cannot be urged in favor of the open treatment that antisepsis is entirely out of the question. The researches of Prof. Nägeli have shown that the development of certain organisms is interfered with if the fluids upon which they have lodged and for which they must depend for their nutrition, reaches a certain degree of concentration or condensation. In the open method this object is gained in a most decided manner by the free evaporation which the exposed wound surface favors, and the consequent drying out or condensation of the secretions of the wound. Clinical experience and the results of experiments both show, therefore, that antisepsis is represented in the open treatment of wounds to a greater or less degree. The antisepsis thus brought about, however, is often insufficient in amputation wounds and always unreliable in cases of compound fracture, and in wounds of joints.

It is granted that bacteria and other forms of germs are found under antiseptic dressings. The researches of Ogston have shown that not all of these are potent for evil, and Klebs has even found bacteria in the arachnoid fluid of a healthy human brain. The questions in controversy regarding the causes of putrefaction and the peculiar influence which a particular species of germ has upon the process of decomposition are immaterial for surgical purposes. The question is, can these be prevented from developing any injurious influences in the wound secretions where they may happen to exist? That Lister's antiseptic method, properly carried out, effectually prevents these ill effects is now fairly established. A mode of treatment, simpler in detail, yet securing the same safety, is a great desideratum.

Perhaps no more beautiful exemplification of the usefulness of the strictly Listerian dressing may be seen than the results which follow its employment in compound fractures. Within twenty-four hours after the reception of such an injury, if treated without reference to sepsis or asepsis, the colored serum oozing from the wound is found to be in a state of decomposition, as proven by its offensive odor; and during the period intervening between the infliction of the injury and the period of suppuration, the smell continues to be more and more offensive. The larger the external wound and the more extensive the laceration, and consequently the greater the depth to which the atmospheric air penetrates, and the increased difficulties attending the irrigation or other common method of cleansing, the more strikingly is this shown to be the case. On the other hand, the smaller the wound and the less the tissues invite the entrance of air, the better the prognosis as regards the supervention of erysipelas, pyæmia and septicæmia. If immediate closure of the orifice after reduction of the fragments in this latter case is practiced, either by the use of a wad of cotton having collodion incorporated in its meshes, thus forming an artificial scab, or by allowing the coagulum to dry as advised by John Hunter, the air is excluded, evil consequences are averted, and the coagulum, becoming organized, is absorbed, and the injured parts are placed under conditions exactly similar to a simple fracture. Any failure, however, in such a form of dressing, results in the most disastrous consequences; the small orifice now becomes of the greatest possible disadvantage, inasmuch as free drainage is interfered with or altogether prevented, and burrowing of foul decomposed serum and pus, with all their long train of evils, result. It is a question whether, in such a case, in the absence of some form of strict antiseptic dressing, it would not be better to enlarge the opening and encourage free drainage at the very outset. In this class of injuries the strict observance of the three essentials to successful treatment, *i. e.*, rest, free drainage, and antisepsis, is of the greatest importance. Opinions may differ as to the best means of carrying out these indications, but in the experience of those who have given the Lister occlusive dressing, with the necessary preliminary precautions, a fair trial, find the cases to which this method is inapplicable of very rare occurrence. A favorite method with Von Nussbaum is, after thorough disinfection and making provision for free drainage, to fill the cavity of the wound with powdered salicylic acid and apply the Lister dressing over all. Immobilization may be secured by fenestrated permanent splints, or such other means as the exigencies of each case may require. The original plug of salicylic acid is very rarely disturbed during the after treatment, it being slowly dissolved and pushed out by the granulations. It acts as a storage of antiseptic material from which is being constantly supplied to the wound an amount necessary for its needs.

In injuries of apparently minor importance, the antiseptic method is not to be neglected. Scalp wounds, for example, heal kindly in the majority of instances; but occasionally the wound, contrary to all expectation, develops an ichorous discharge with a foul odor; the cutaneous surface assumes a yellowish hue, irregular chills, followed by high temperature and failure of the vital power, all announce, in language not to be mistaken, that the veins of the diplöe have become channels through which blood poisoning has occurred. An erysipelatous flush spreads over the pericranial tissues, and delirium and death close the scene. All this may and does occur in the pure air of the country as well as in hospitals with their germ-laden atmospheres. Such was the constant experience in the surgical clinic of the Munich General Hospital prior to the introduction of Lister's method. Regarding his later experience in this same clinic Von Nussbaum says: "From the time that Lister's dressing was introduced in my clinic we have never seen one case, treated there from its beginning, which presented these appearances, the contaminated atmosphere notwithstanding."

At the outset I had intended to say nothing upon the subject of the manipulations essential to a successful carrying out of the Listerian plan. In view, however, of the importance of every minutiæ, I consider that attention cannot be too frequently called to the exact methods of preventing failure and guarding against disaster. First in the order of detail, and I had almost said of importance also, is the preparation of the part to be operated upon, and the thorough disinfection of everything to be used in connection with the operation. In his refinement of neatness Lister has insisted that the parts be very thoroughly soaped and well washed with water; this being followed by a sponging with ether to remove all fatty particles. Although no possible harm can come from following out to the letter every one of these instructions, yet in deference to the wishes of those who are constantly endeavoring to simplify the method, surgeons of late years have contented themselves with bathing the parts with the stronger of the two solutions hereinafter mentioned.

In order that no confusion may exist as to just what solution may come in contact with the wound, I will state that, with the exception of compound fractures and wounds that have been exposed to contact with the air or other sources of infection, none but the two and a half per cent. or one to forty solution should come in actual contact with the surfaces of the incised tissues during the operation. It is from this solution that the sponges or bits of muslin are wrung out when required for use; the instruments are likewise kept immersed in it when not in actual use. Although the solution for the spray-producer is of the strength of five per cent., or one to twenty, yet when diluted with the steam from the boiler, it is of the strength of one to forty, or two and a half per cent. In case atmospheric pressure is used as the force to pulverize the carbolic acid solution, the weaker solution should be used. If we remember that this weaker solution and this only should ever touch the wound, we will not commit the error of using a caustic application when a mild antiseptic would suffice.

Of the articles coming in contact with the wound, those which require especial attention are—first, the surgeon's hands; second, the sponges; and third, the instruments. A thorough disinfection of the surgeon's hands is of the greatest importance, for not only are they the lodging place of ordinary organisms, in common with everything exposed to the atmospheric air, but in addition are liable to become the bearers of special germs from patients suffering from infectious diseases. If the surgeon is in the habit of making post-mortem examinations, these precautions become doubly necessary. The free use of water and a nail-brush, and smearing the hands, as Von Nussbaum recommends, with carbolized vaseline, in the proportion of one part of crystals of carbolic acid dissolved in glycerine, thoroughly rubbed up with ten parts of vaseline, will accomplish this object. This latter is thoroughly rubbed in all of the wrinkles and folds of the hands and beneath the finger nails. Its advantages over the ordinary carbolic solution bath in which the hands were formerly dipped are, that it does not give rise to the peculiar numbness of the finger tips which occurs from the use of the latter. In fact, it prevents, in a great measure, the occurrence of this very disagreeable sensation, as well as the roughness of the hands commonly found among those who use constantly the Lister method.

Some surgeons have abandoned altogether the use of sponges in operations performed Listerially, using in place of them pieces of old muslin or linen, easily procurable, as a rule, in every household. These are dipped in the strong solution first, afterwards wrung out of the weak solution and placed in a convenient place for use, if possible, within the range of the spray. If sponges are used they should be first thoroughly scalded, and then placed in the strong solution until ready for use, when they should be transferred to the weaker solution. Too much care cannot be bestowed upon the proper cleansing of the sponges, for they are especially liable to become the lodging places for putrescible matters.

All instruments to be used during the operation should be placed in the strong solution first and their surfaces well rubbed with a piece of sponge dipped in the same solution. Canulæ and other hollow instruments require particular attention, for, from their peculiar conformation they are especially likely to have their inner surfaces overlooked. A bit of wood armed with a piece of lint or muslin dipped in the strong solution should be passed through the interior of all such instruments in order to insure complete cleanliness and disinfection. Saws should have a stiff brush, previously dipped in the strong solution, applied vigorously crosswise to their cutting surfaces, in order that whatever débris remains from previous operations, and lodged in the teeth, may be removed or rendered harmless. Additional security may be afforded by smearing saws, forceps and other instruments having irregular and angular surfaces with the carbolized vaseline. These necessary preliminaries to an antiseptic operation may seem in some respects superfluous; they really amount, however, to but little more than a close attention to the ordinary details of extreme cleanliness.

The next thing requiring attention is the disinfection of the atmospheric air which is to surround the wound during the time that its surfaces are exposed. This part of the manipulation has been the subject of almost as much discussion and varying opinions as to its usefulness or uselessness as the system as a whole. It has been the point of attack of every opponent of Lister, and has been abandoned by even some of his otherwise staunch supporters. The reason for this I could never understand. Its use is certainly based upon as tenable grounds as any part of the procedure or dressings. It simply consists of bringing a cloud of pulverized solution of carbolic acid in water to bear upon and envelope the field of operation, rendering inoccuous any germs floating in the atmosphere or emanating from the persons of the operator or his assistants by means of the breath, etc. The necessity for this portion of the manœuvre is certainly apparent enough, and the means of accomplishing its purposes are readily available. Any one of the numerous spray-producers now in the market will answer the purpose more or less perfectly, and the barest possible mechanical skill suffices for their proper management. It is simply necessary to be sure that the boiler (if a steam atomizer be used) is of sufficient capacity to hold water enough to furnish a spray during the operation; to have a spray tube which cannot become clogged and which will furnish the finest possible cloud, and to have the apparatus held by an assistant who will see to it that the spray is not brought too near to the wound, and that the cloud surrounding the field of operation maintains its proper relative position.

Thus during the operation security is afforded against the injurious influences of atmospheric germs. If every instrument, as soon as it leaves the surgeon's hands, is at once placed in the germicide bath, if every sponge is wrung out of the same solution and the spray or cloud of carbolized water is kept constantly surrounding the wound, every avenue of approach is guarded. The solutions in which the sponges are placed and out of which they are wrung, as well as the bath in which the instruments are kept, should not be changed during the operation;

although they may appear æsthetically dirty, yet they are, in truth, surgically clean. If from any reason the spray is interrupted before the completion of the operation, the wound should be immediately covered with a piece of muslin or other material wetted with the one to forty carbolic solution.

The operation completed, unless something has occurred to cast suspicion upon the completeness of the precautionary measures against the entrance of germs into the wound or upon the parts to be covered with the dressings, the latter should be immediately applied. Some surgeons bathe the parts with a strong solution of carbolic acid, hoping thereby to make assurance doubly sure; this practice, however, only leads to carelessness in some of the details before and during operations, and should not be relied upon. Aside from this, the caustic action of the stronger solutions leads to more or less death of the delicate connective tissue of the parts operated upon and a consequent delay in the healing process. Nothing stronger than the one to forty solution should be used, and this but sparingly.

Everything being in readiness to close the wound, the surgeon should next turn his attention to the matter of drainage; what material to use for the purpose of facilitating the free passage of discharges from the deeper portions of the wound to the surface, and what disposition to make of this material in order to derive the greatest advantage from its presence, and at the same time avoid any irritation arising therefrom, are questions of the greatest importance. The materials used for this purpose are India-rubber in the shape of tubing of different diameters, horse hair in bundles, chromicised gut, and the decalcified absorbable bone drains of Neuber. These each have their place and application. For large wounds, such as follow the major amputations, India-rubber tubing of from three-eighths to five-eighths of an inch in diameter is probably the best. Horse hair and chromic gut are useful in the wound following the excision of ganglion, incisions into bursal tumors and joints, and for draining cavities left after removal of small tumors. Bone drains are applicable in excisions of joints and in some large wounds when it is possible, under certain favorable circumstances, to secure union at once, and under the very first dressing, as, for instance, the wound following an amputation of the breast. If the tubes, either of rubber or bone, be selected, care should be taken that the openings in their walls are sufficiently large to admit of the free passage of serum into the tubes, and that the calibre of the tube itself be not too small. If chromic gut or horse hair be used, it is better to err on the side of placing too large a bundle in the wound than to run any risk of damming back the secretions and producing tension by not providing abundant vent for the discharges. As the necessity for free drainage becomes less urgent, smaller tubes may be substituted for the larger ones in the case of rubber, and thread after thread of the horse-hair may be removed when that material is used. Chromic gut and the bone drain are softened and absorbed, and do not require removal, unless some failure in the function occurs. Lister cuts off the projecting end of the tube nearly flush with the surface, and passes a safety or small nursery pin across and through the tube in such a manner as to prevent it from slipping back out of sight, in the event of swelling of the adjacent parts occurring. The rubber tubes are to be shortened day by day, and, in case they become clogged, are to be removed and cleaned. Other measures to insure complete drainage should not be overlooked, such as position and the removal here and there of a suture where there seems to be too great tension.

As the most rapid union possible is sought in this dressing, the sutures are to be placed in position as soon as all hemorrhage shall have been arrested. Cat-gut ligatures especially prepared are now almost universally used, and the gut prepared after the manner of Macewen, and known as chromic gut, is undoubtedly the best.* The material used for sutures may be either silver wire, carbolized silk, horse-hair or chromic gut; "E." banjo strings, properly chromocised, are of a size convenient for general use both as sutures and ligatures. Where apposition of the parts is difficult or impossible by means of the superficial suture, the deep suture may be employed. It should, however, be removed at as early a period as possible, as it excites suppuration along its track. All materials to be used as sutures or ligatures should be thoroughly purified and rendered aseptic by carbolic acid. They should likewise be dipped in the stronger carbolic solution and subsequently in the weaker solution before being used.

Having carefully closed the wound and inserted the drainage tubes properly, a strip of the so-called "oil silk protective" is laid upon the line of coaptation of the wound. This, as its name implies, is a means of protecting the wound from the irritating effects of the atmosphere of carbolic acid, which is thereafter to constantly surround it. The ordinary oil silk, as kept in the shops, purified in the one to twenty carbolic acid and then smeared with carbolized oil of the strength of five per cent., answers the purpose and may be conveniently obtained. When procurable, however, it is better to employ the prepared protective

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*For a very full and detailed account of the method of preparing chromic gut, together with a dissertation upon its behavior in the living tissues, see article by William Macewen, Surgeon and Lecturer on Clinical Surgery, in the Glasgow Royal Infirmary, in *Annals of Anatomy and Surgery*, vol. iv, page 129, October, 1881.

with a coating of carbolized dextrin and copal varnish. Holes are cut in the protective corresponding to the drainage tubes, and these latter are made to protrude through the former, in order that the drainage may be effected directly into the gauze dressings.

The application of the carbolized gauze dressing now follows. A crumpled piece should first be loosely placed over the mouth of each drainage tube. Layer after layer of the same material is now to be so placed as to obtain the greatest thickness of dressing at points where the discharge is expected to be the most profuse. A roller, also of gauze, may now be passed loosely about the parts to hold in position the layers of gauze. A piece of fine rubber cloth of the variety known as Mackintosh, waxed or paraffine paper, gutta-percha tissue, or other impervious material is now to be arranged over the layers of gauze, with its edges overlapping the latter at least an inch on all sides. The whole is held securely by a roller of gauze, or, what I have found to answer the purpose far better, bandages made of very thin rubber, or "rubber dam," as it is called by dentists, who use it in certain operations about the teeth. This bandage offers some advantages over common muslin or gauze, in that it is an additional protection to the dressings, its overlapping edges, as it is applied with one turn partly overlying another, become glued together by the adhesive qualities of the pure gum rubber. When good rubber dam bandage can be obtained, the Mackintosh may be dispensed with altogether. The spray should not cease playing upon the parts until the very last turn of the outer bandage completes the dressing.

The indications for removal and renewal of the dressings are as follows: First, the edges of the dressings should be narrowly watched, and upon the least appearance of any discharge the dressings should be at once investigated, and, should they prove to be soiled, they must be removed at once. The discharge, coming in contact with the air, at once forms a medium of communication between the wound and the atmosphere, and putrefaction may be set up at once under the dressing. Second, extreme pain. This may be due to an unequal distribution of pressure, or to bandaging the parts too tightly. The Lister dressing, properly applied, is the most comfortable of all dressings. Third, the detection of odor in or about the dressings. This should never be allowed to pass by unnoticed; the dressings should be absolutely odorless. Fourth, the occurrence and persistence of a temperature higher than ordinary surgical fever would occasion. The existence of each or all of these conditions imperatively demand an immediate inspection of the wound.

In closing this report upon the treatment of wounds by the method of

Lister, I desire to disclaim any intention of urging its general adoption upon the plea of infallibility. I have endeavored to show that the method gives greater immunity from danger than methods commonly in use before its introduction; but it would be the height of folly to assume that any special manipulation or dressing insures absolute safety. One of the greatest dangers to which the system is exposed is the tendency on the part of some of its advocates to claim for it perfectness in every detail, a consummate excellence for all purposes of wound dressing. To assume this, with all that it implies, would tend to absolve the surgeon from just responsibility, and lead him away from the exercise of that zeal and care which should always characterize his treatment. Another danger which threatens it, and which is likely to bring it into disrepute, arises from the unintelligent use of the method by those who do not fully appreciate the necessity for the strict observance of many of its essential details. If it be universally recognized and conceded that antiseptic surgery, in its broadest sense, is to be the surgery of the future, and that surgical cleanliness should be the principle underlying every method of wound treatment, surgeons could soon be brought to an agreement as to the best method of carrying out the general indications. The establishment of these principles once fairly effected, the "ism" may soon prove irrelevant, but the name of Lister can never be forgotten by a grateful and appreciative world.

DISCUSSION.

Dr. J. C. Hutchison: There is one point in the paper of Dr. Wight to which I wish to call attention. I understood him to urge, as one objection to Lister's method, the complicated character of the dressing, and the time required for its application. And upon this point I entirely agree with him; but it seems to me that if we adopt the method which he recommended—that is, disinfecting the nurse and assistants, the surgeon, instruments, etc., before beginning the operation, there cannot be very much labor saved.

Dr. Fowler has presented Listerism in a very satisfactory manner, as it has been presented again and again by Lister himself, and others. The results which the doctor has quoted, especially from the German hospitals, indicate the highest degree of satisfaction in the method of treatment. It seems to me that we have enough experience in our own community to decide pretty well the comparative value of Listerism and the various modifications. I do not think that many surgeons here now use Listerism pure and simple. A great many of us have practiced it. I know some, also, who deem it their duty to conscientiously pursue the method still, but a majority of surgeons in this vicinity now use antiseptic methods which have but little claim to Listerism.

There are some points in connection with this subject which have occurred to me, and which I will, with your permission, sir, take the liberty of presenting. The first is, how is it that carbolic acid is useful in the treatment of wounds? Is it because it is a germicide? That is, I think, doubtful. It has been maintained that it is not at all a germicide—that it merely produces an anæsthetic condition of the germs, and that as soon as the acid evaporates, they spring to life again, and are as active as ever. Experiments have been made which prove that thymol is a germicide; but it does not accomplish the same results as carbolic acid in the treatment of wounds. It is fair to infer, therefore, that it is not as a germicide that carbolic acid is useful in the treatment of wounds. I think it is pretty generally conceded that carbolic acid is an anti-phlogistic; that it controls inflammation and suppuration, and that it is a local anæsthetic as well as antiseptic. Any one who uses carbolic acid much, must be sensible of its benumbing effects upon the hands and fingers, and for this reason it is sometimes mixed with vaseline (1 part to 12) to prevent local disagreeable effects.

There is another point of which I have thought, and that is, that the carbolic acid, as recommended by Lister, and as ordinarily used, is very much stronger than necessary. In 1867 I had an opportunity to witness the treatment of wounds, by Maisonneuve, in the Hotel Dieu, Paris, by means of carbolic acid. It did not occur to me to ascertain the strength of the acid made use of. The same year Lister published his first paper on the subject, and then began his splendid career. Soon after I returned to this country; after a conversation with Dr. E. R. Squibb on this subject, he made some experiments to determine the strength of carbolic acid solutions necessary to preserve animal tissue. He made these experiments with solutions of various strengths, and extended the experiments over a long period. He suspended pieces of meat in the solutions, and found that the meat was perfectly preserved in a solution of one part of the acid used to two hundred and fifty of water (about one drachm to the quart of water). Since that time it has been my habit to use a weak solution. Previous to that, when I used Lister's method, I always used the solution which he advises; but I think, in a large majority of cases, the weaker solutions used by me would be sufficiently strong for all purposes. It is a very common practice with me to use a solution of carbolic acid in the treatment of burns. This was suggested to me by Dr. Squibb.* The strength of the solution was, as suggested, one part to two hundred and fifty. Cloths are dipped in the carbolic acid mixture and applied to the parts affected, and the relief is instantaneous. I suppose the cause of relief is by local anæsthesia exerted upon the tissues. It may be, also, by coagulating the albumen—thus protecting the tissues from the contact of the air. The anæsthetic and anti-phlogistic effects of carbolic acid are manifested in a striking degree in the treatment of paronychia. When we observe the beginning of a paronychia, if the parts are wrapped in a cloth soaked in this solution (one part to two hundred and fifty), and a cot, made of oil silk, put over it, for the purpose of preventing evaporation, two or three times a day, in very many cases the disease will be aborced. In the treatment of lacerated wounds of the fingers and hands, the same method is adopted, and with the same satisfactory results.

In the remarks made as to the remarkable results observed in Germany by the use of Lister's method, I think one word is necessary. Everybody who knows anything about German hospitals, knows that, until a recent period, they have been remarkable for great uncleanliness. The condition in this regard, years ago, is scarcely credible. Now, under these circumstances, it seems hardly fair to compare the results obtained then with the results obtained since Listerism was adopted in those hospitals. It would be fairer to compare the results obtained through Listerism with the results obtained by other methods now, or by modified Listerism. We all use carbolic acid. It is certainly one of the most valuable remedies known to surgery.

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* See, also, U. S. P., 12th edition, p. 41.

If I were to formulate a method for treating wounds, I would have to follow in the track, to some extent, of the gentlemen who have preceded me. My experience as to the best method of treating wounds is this: Take, for instance, a large wound, left by the removal of a leg or of a mammary gland. The operation should be preceded by washing the part thoroughly. The instruments should be cleaned—the surgeon should pay special attention to this—and he should have his hands thoroughly clean. Then the operation is begun. After it has been completed the hemorrhage should be thoroughly arrested. This may be done in various ways. I differ from Dr. Skene as to the value of torsion. I use it more than any other method of arresting hemorrhage. I do not believe in the danger of sloughing of the ends of the vessels which he ascribes to it. It may not be so secure a method as the ligature, but my confidence in it is so great that I have practiced it upon such an artery as the femoral, leaving the patient fully satisfied that there would be no secondary hemorrhage. Hemorrhage may be arrested by torsion, by carbolism, cat-gut ligatures, or by antiseptic silk ligatures—which were first suggested to me by Dr. Skene, and I presume he suggested them to the man who made them. They are saturated with a mixture of salicylic acid, carbolic acid, and yellow wax, in the following proportions: Salicylic acid, 2 drachms; carbolic acid, 1 drachm; and yellow wax, 7 drachms. The wax is first melted, then the salicylic acid is added, then the carbolic acid. I have used ligatures prepared in the same way with great satisfaction.

There is one thing to be observed in using these ligatures: after a time, unless they are kept air-tight, the carbolic acid evaporates. It is a good plan to dip them in Van Bruns' fluid on the day of the operation, if they have been kept for some time. This thoroughly re-carbolizes them, and renders them antiseptic and quite innoxious to the tissues. After the bleeding is arrested, the parts are brought together by the ordinary sutures, or by silk sutures prepared in the manner which I have indicated for ligatures. These ligatures, I may state for the information of those who desire to use them, may be obtained at Heidenreich's, corner Clinton Street and Atlantic Avenue. I use the very finest thread, always testing them before I use them. The edges of the wound are coaptated. In regard to drainage, I think it a very important matter in the treatment of wounds. I know that some great authorities do not use drainage now. In the celebrated discussion in the International Medical Congress before referred to, Spencer Wells stated that he had given up drainage in ovariotomy. He says it is unnecessary when carbolic spray is used, because any secretions into the abdominal cavity are thus made aseptic. Dr. Keith, a gentleman whom you all know, by reputation, does not use drainage, except in severe operations, and in cases of cysts with putrid contents. Dr. Sims, on the other hand, in that discussion, stated, if he had to give up either the carbolic spray or the drainage tube, he would give up the spray. I think drainage in ordinary wounds is very useful for the purpose of carrying off fluids which would become septic if they were retained; and after the drainage tube has been introduced, the wound should be pressed upon, so as to force out all the blood, etc., and then covered by a layer of oakum. I think oakum is of the best dressing—the best dressing in use in ordinary surgical wounds; this should be covered by a bandage so applied as to bring the cut surfaces in contact. We all know the experience of Guerin in the use of cotton as a covering for wounds. He claims remarkable results. He uses it for the purpose of keeping out germs. That it does keep out germs, we can believe. Tyndal has shown that it is even more efficient for this purpose than strong acids and caustic solutions. Various other things have been employed—carbolated cotton, salicylated cotton; but the dressing I prefer is oakum. It is a good absorbent, and is as good an antiseptic as can be used; and this we can understand when it is remembered that the tar which it contains has, as its chief constituents, carbolic acid, creosote, and various empyremuatic oils.

Now, sir, I think that all the gentlemen who have spoken to-night agree on the importance of *keeping the parts at rest.* Wounds should be disturbed as infrequently as possible. I am sure that every surgeon's experience is the same, not only with wounds, but with almost every surgical disease. This is especially true in regard to diseases of the joints. Over and over again I have seen joints saved by making them immovable, that had been condemned for excision or amputation. It is an excellent adjuvant in the treatment of all forms of surgical diseases and wounds. Bishop Berkley, I believe it was, who, in speaking of tar water, said, if he could get upon an eminence of sufficient height, and had a voice loud enough, he would say to all valetudinarians throughout the world, use tar water in lung complaints. I feel inclined to assume the position taken by Berkley, and say, use rest as an important adjuvant in the treatment of surgical diseases and wounds.

DR. B. F. WESTBROOK: Why do we not have absorption of septic matter when there is an open surface? Dr. James R. Wood published, some years ago, the results of his treatment of open wounds in the wards of Bellevue Hospital—an institution notorious for the number of septic cases occurring in it. Though the amputation flaps were exposed to the air without dressing, there was no development of sepsis. It would be interesting to consider why it is that you do not get absorption of septic matter from raw surfaces. We are all familiar with the statement of Billroth, that granulation tissue does not contain lymphatics. That is given as a reason why granulations do not absorb putrid matter. While that may be true, possibly, of granulation tissue, it cannot be true of the open wound recently made, which has been made, perhaps in an amphitheatre, where lectures on anatomy are given every day, and where post-mortems are occasionally performed. I take it that the reason is simply a mechanical one, and one of a difference of pressure between the inside and outside of the flap. That, in my teachings of surgical pathology, I have endeavored to impress upon my class as the reason. Many of the various phenomena connected with the surface of the flap are due to these differences in pressure. The pressure at the surface being less than in the interior, there is a tendency of all movable bodies to pass outwards; and there is a constant current, both of serous and cellular substances, towards the surface, and on the surface. If such a flap is left open for a considerable time, it is first glazed over, and subsequently exudes pus. At first the watery secretion increases; this gradually becomes thicker and more opaque, from the presence of cells, and finally is changed to a yellow, creamy pus. If we make a section of the flap and examine it microscopically, we find that the outer layer of the wound is crowded with these cells, which, apparently, are pushed up to the surface by a pressure from beneath. Both the cells and the serum are pushed up on the surface by this action, and run away as pus, and it is difficult for foreign matter to pass in the opposite direction.

In the case of compound fracture there are reservoirs left in the interior where materials can accumulate, and where this active outward pressure is balanced by that of the retained substances. Therefore these are the injuries in which we get septic poison when the wounds are not treated by Listerian or some other antiseptic method.

There is another point which has occurred to me, and that is what Dr. Skene has alluded to, as to the great difference which exists in the healing properties of tissues, not only in different parts of the same body—as the hand and foot—but also between the same parts in different individuals. This involves a principle to which Paget has alluded in his statement of the conditions essential to the proper nutrition of a part, and with which we are all familiar. Among other necessary conditions is included a right state or condition of the part to be nourished. If you do not have the part to be nourished in the right state or condition—in other words, if the physiological metabolism of the cells is not going on as it ought to, there is room for external or foreign chemical processes to be set up within the cell, and then we have produced a train of morbid symptoms, *e.g.*, inflammation, etc. This point is very well brought out by Dalton, in his work on Physiology, in accounting for the fact that ulceration does not occur in the healthy stomach. The fact is, there is a physiological process going on in the cells which cannot be displaced unless some other stronger chemical process takes the place of it. Under ordinary circumstances this process is not disturbed; but when ulceration or like morbid action occurs, there is a disturbance in the normal processes. So in every wound or injured limb, if the normal physiological properties are present—if the metabolism of the cells is up to the physiological standard—the resistance to injurious agents is correspondingly great, and septic or other diseases are not readily established.

There is still another point which occurred to me while Dr. Fowler was reading his paper; and that is, that it is not safe to compare the peritoneum, as we have too carelessly done, with other tissues of the body—or, rather, to compare the results in ovariotomies with those of operations upon other portions of the body, where other tissues, *e. g.*, muscles, are wounded. Doctor Skene has truly remarked, that the wound in an ovariotomy is similar to that made in other operations. But while this is true of the incision in the abdominal wall, it is to be borne in mind that by that incision the peritoneum has been exposed to influences which may act injuriously upon it. We know that when the skin becomes inflamed over a large surface of the body, the effects are disastrous. A burn covering one-half of the body will be fatal, surgeons say. The surface of the peritoneum is greater than that of the skin, and if it becomes inflamed, the effects must be entirely different from what would be expected or is witnessed in an ordinary injury or wound. Then, again, it must be borne in mind that it presents a very great surface for absorption, and the chances for absorption of carbolic acid or septic germs are greater in ovariotomy than in ordinary wounds.

DR. E. R. SQUIBB: It was insisted by Lister, in the early part of his career, that there was a great difference in carbolic acid, and he insisted on a very pure and clean acid. Dr. Squibb thought the cleaner and purer antiseptics are the better they conduce to the carrying out of the objects of the treatment.

DR. L. S. PILCHER: I have been gratified at the prominence given to the question of the influence in the healing of wounds of the constitution previously existing in the individual wounded. We all know that in the human body there is always a tendency to repair after injury, and that the ability to overcome injuries received varies greatly in different persons. Perhaps no better illustration of this can be given than that which the wards of Nussbaum afforded, as stated in the paper of Dr. Fowler, where, of the patients subjected to the same conditions, eighty per cent. died, and twenty per cent. recovered. Why did the one in the one bed recover, and the four in the adjacent beds die? I was very much struck by an example which was related in my presence, recently, by my friend, Dr. Atkinson, in which he spoke of a patient who had suffered a lacerated wound of the most aggravated character. Although his case was apparently hopeless, amputation was performed. He was then placed in the ward beside a patient who was suffering from pyæmia. To the astonishment of all he recovered without an untoward symptom. We know full well that there are some people whom it is impossible to kill, apparently. There are some constitutions which will stand almost anything. In our attempt, therefore, to compare the results of treatment of wounds, we must take into consideration this element, as it has an important bearing upon the conclusions reached.

With regard to the results of wounds and the methods of treating them, I am of the opinion that a successful treatment of wounds depends upon the removal from them of every source of irritation. This one phrase—protection from irritation—I believe, will be found to be comprehensive enough to embrace all the essentials of wound-treatment. Wounds which are recent, being simple, we are accustomed to think of as injuries that will speedily be recovered from; but, even if they are simple wounds, it is necessary, in order that we shall have such speedy recovery, that they shall be carefully guarded from irritation. In guarding a wound from irritation, the first thing that is necessary is that there shall be a complete suppression of hemorrhage; certainly there should be no blood left upon the surface of the wound, for it becomes an irritating substance, and, therefore, interferes with recovery. In the next place, a certain degree of warmth should be maintained. The temperature should not be below that of the body certainly; otherwise the processes of nutrition and repair are interfered with, and the imperfectly nourished particles become sources of irritation, and the repair of the wound is delayed. And lastly, that irritation may be lessened, it becomes necessary that the surfaces of the wound shall be supported in coaptation with each other; and this includes all the necessary considerations in reference to the application of sutures, and of sticking-plasters, of bandages, of compresses, of drainage, and all those proceedings which are usually considered as necessary in the proper management of a wound, whether extensive or small. All of these things are necessary for us to attend to, for the cure of a simple wound even. If, however, the wound is a complicated one—one in which immediate union is not expected—it is so because it is a wound in which, as a result of the injury, there are sources of irritation which must be gotten rid of before repairs can be completed.

We have long been accustomed to believe that the atmospheric air in wounds, such as I am now speaking of, had a source of irritation which we could not avoid. As a result of this belief with regard to atmospheric air, very much of our teachings and theories, with reference to the difference between subcutaneous injuries and others have arisen. The proposition laid down by John Hunter that subcutaneous injuries seldom inflame, and that if they were placed in a favorable position for repair, repair takes place rapidly and uninterruptedly, has been accepted by us. Because such wounds were protected from the irritating influences of the atmosphere, by the integument, we have believed that they escaped inflammation, or at least suffered from it in a less degree than they otherwise would; accordingly it has been our habit in times past to try, by medicaments, to irritate as far as possible the covering of the skin, so as to protect wounds from the atmosphere, and thus secure more rapid recovery. Many of the complicated methods of dressing in past years had this in view. During the past few years, however, we have come to understand that it was not the atmospheric air itself which acted as an irritant to wound surfaces, but that it was certain ingredients, certain accidents, contained in the atmospheric air which were the cause of irritation; and it is only very recently that a series of experiments sufficiently extensive and sufficiently careful has been brought to a successful conclusion, in which these accidental ingredients of the atmosphere have been so isolated and examined that we are enabled to say what it is that the atmospheric air contains which is detrimental to wounds.

The labors of Prof. Ogston, which only during the last year have been made public, and in which an enormous number of carefully guarded experiments have established the conclusions he has announced, have given wonderful and greatly desired light upon this point of the irritating influence of the air upon wounds.

As the result of Prof. Ogston's experiments and investigations, we find that in atmospheric air there may be present four kinds of minute organisms, technically called micro-organisms, which, having been deposited on wound surfaces, exert an injurious influence upon them. Some of these are more frequently and more numerously present than others. The four classes of micro-organisms referred to are the Spirilli--cork-screw-shaped; Bacilli—rod-shaped; Bacteria—sausage-shaped, and the Micrococci—sphere-shaped. Invariably, when in a wounded surface inflammation was produced, Prof. Ogston found one particular form of micro-organism present, *i. e.*, the micrococcus. Whenever, in the treatment of wounds, inflammation was absent, the minutest examination always failed to find the presence of the micrococcus. In cases where in addition there is a putrid condition of the secretions, there are always to be found in addition other of these micro-organism. We know the appearance of these micro-organisms and their natural history; while their whole course in connection with wounds has been studied and commented upon. It becomes necessary, therefore, if we desire to understand the treatment of wounds, to understand these micro-organisms; it becomes necessary, in order to obtain a speedy union of wounded surfaces, that we adopt means for the destruction of these minute irritants, and the prevention of their introduction by wound surfaces. Until within the past few months this has been a matter of speculation. It has been one of the reproaches against antisceptic surgery that so much of it depended upon theory. It seems to me that by the studies of Ogston this reproach has been removed, and hereafter in our attempts to bring surgical procedures to a higher grade of perfection, now that we know what our enemy is, we shall be able to work with a much greater degree of certainty.

Still further, it has been shown that when micrococci have gained access to deep recesses and partially closed cavities communicating with wounds, they find there the conditions that in the highest degree promote their development, so that they proliferate with great activity. They not only irritate the wound and interfere with its repair, but they penetrate the tissues and gain access to the blood, and become there the source of the train of conditions which we call septicæmia. Finally they appear again in various of the secretions of the body, and notably in the urine.

When, however, wounds are kept so open that atmospheric air has free access to every part of them, the micrococcus fails to manifest much energy, and it proliferates slowly. Here we get great light as to the reason why the "open treatment" of wounds has been so often productive of excellent results. The atmosphere is the carrier of poison, but it is itself in some measure an antidote to it.

Two further practical facts were brought out by Professor Ogston. He found that by the adoption of the methods known as those of Lister, he invariably succeeded in preventing the access of any of these micro-organisms to wounds. When, however, surfaces were examined by him in which the access of the germs had not been prevented, he found that only by the thorough use of strong germicides was it possible to cleanse the wound of them.

In response to the challenge for the production from the experience of our American surgeons results which demonstrate any superiority in the methods of Mr. Lister over those less complicated and more frequently adopted, and to meet also the demand that we should compare the results of the different methods adopted by surgeons of to-day, I want to call attention to the labors of my friend, Professor Gerrish, of the Maine General Hospital, who last spring published the results of such a comparison made in the wards of that hospital. He was an enthusiastic adherent of antiseptic surgery according to Lister; among his colleagues was Dr. Wm. Warren Green, referred to in one of the papers of the evening. Professor Green was not an adherent of Lister. Professor Gerrish treated six (6) cases of excision of the breast according to

Listerian methods. His colleagues excised the breast in seven (7) cases. They were all in the same ward, and cared for by the same nurses, fed with the same food, and their conditions were as near as possible the same. It is not to be forgotten that their constitutional differences are to be looked after, and it was stated that the constitutional conditions of those treated by ordinary methods was quite as good, if not better, than those treated antiseptically. The results were as follows: The average number of days in hospital of patients treated antiseptically, was 12⅔. When they left the hospital, every one left with the wound entirely closed, except in one case. Of those who were treated according to the ordinary methods, the average stay in hospital was 23⁴⁄₇ days, and in only three cases had complete healing of the wound taken place at the time of the discharge. Of the cases treated antiseptically, in every one was union by first intention obtained without suppuration, except in one case, in which atmospheric air was accidentally allowed access to the wound. Of the non-antiseptic cases, in all there was suppuration. Here, then, has been performed a practical experiment, by one of our own colleagues, in conditions that were especially favorable for rendering the results decisive, a real *experimentum crucis*. The results need no comment.

In conclusion, I dwell again upon the importance of the truth that if wounds of all kinds are to be brought to a most certain and speedy cure, they must be kept free from irritation; it has been seen that theory, experimental investigation and clinical tests have united in the demonstration that it is not only possible to protect wounds from even the subtle irritants contained in the atmospheric air, but also that it is important that this be done. The method of Lister accomplishes this with certainty, but not without inconveniences and dangers of its own. Its success is a stimulus to continue the search for a method or for agents which shall be equally efficient and less objectionable.

DR. HUTCHISON: At this late hour I will only detain the Society for a moment. I have recently done osteotomy of the femur in eight cases—five of supra-condyloid osteotomy for knock-knee, one Adam's operation' on the neck of the bone, and two Gant's operations below the trocanter minor, for anchylosis with deformity at the hip-joint. Five were done with the spray, and three without it, and all did equally well. I am aware that neither eight nor the fourteen cures alluded to by the last speaker are sufficient to determine whether it is best to use strict Listerism or not. I might refer to a much larger comparative experience if the time permitted.

DR. WIGHT: Some years ago I removed a floating cartilage from the knee-joint, and by mistake, opened directly into the joint cavity. My patient had no special trouble, and in two days was walking about. Two years ago I removed a stone put into the bladder by one of my assistants: The cadaver was putrefaction in esse, and may have been full of bacteria before death, which may have been, for aught I know, the descendants of those bacteria found in the body when it is in a state of health. Well, the next day I removed a stone from the bladder of a patient, using the same forceps as I used the day before on the cadaver, and I never had a patient do better. But in the mean time I washed the forceps with a solution of chlorinated soda.

I desire to say that I am not here to-night to oppose Listerism. My object has been to point out the overshadowing importance of keeping a patient and his environment perfectly *clean*, and that this will accomplish as much as can be done by Listerism. Listerism is a big thing, and I have said as much as any man can say for Mr. Lister. I have put his monument by the side of the monuments of Jenner and Harvey. And I have no doubt that Mr. Lister will, in time, as he seems to indicate, abandon the spray, and practice a simpler kind of antiseptic surgery.

Again, as to the use of the term *open*, in regard to the treatment of wounds, I have indeed asked permission to include incised wounds under that term, for reasons already stated, and because I desired to contrast a simple and open antiseptic way of treating wounds, with the complex and troublesome way of covering wounds practiced by Mr. Lister and his followers; for if the environments of wounds are disinfected, the wounds will heal with the simplest dressings, or no dressings at all. And certainly the time was not at my disposal to go fully into the subject. I could only discuss briefly and imperfectly one phase of the subject, and perhaps nowadays this is the most important phase of the subject, showing that *disinfecting* and *antisepting* in a simple way are potential relations in open treatment of wounds as contra-distinguished from Listerism.

THE MEDICAL SOCIETY OF THE COUNTY OF KINGS.

A stated meeting was held on the evening of Tuesday, Nov. 15th, 1881, at No. 398 Fulton Street, Brooklyn, the President, Dr. Jewett, in the chair; Dr. Wyckoff, Secretary.

The meeting was called to order at eight o'clock; about seventy-five members being present.

The minutes of the September meeting were read and approved.

The following named gentlemen were proposed for membership: Drs. Jacob Nehrbas, 441 Bedford Avenue, by Dr. J. S. King; Alexander F. Horton, 238 Macon Street, by Dr. Jos. H. Hunt; William J. Cruikshank, 376 Jay Street, by Dr. J. B. Mattison; Dana C. Lewis, 676 Madison Street, by Jos. H. Hunt, and Daniel K. Drake, 208 Union Street; Dr. William B. Mathewson, St. Mary Hospital; Dr. Mary Dixon Jones, DeKalb Avenue, by Dr. Burge, and Henry McHatton, by Dr. Wilde.

THE COUNCIL reported the acceptance to membership of the following: James McMannus, M.D., L. I. C. H., 1881; Anna A. Forest, Female Medical College, New York, 1880; and Jesse B. Low, M.D., Medical Department Harvard University, 1880.

THE CHAIR stated that the resolution relating to the publication of the PROCEEDINGS, laid over at the last meeting, would be taken up at this point, and on motion the resolution was adopted.

This resolution called for the appointment of a Special Committee on the Future Conduct of the PROCEEDINGS.

THE CHAIR thereupon appointed as that committee Drs. E. R. Squibb, J. H. H. Burge, J. C. Hutchison, C. L. Mitchell, and A. J. C. Skene.

DR. SQUIBB remarked, after the announcement of the Committee, that the subject was a very important one, and one that he did not like to take the leadership of. He was, however, very willing to serve the Society in that way, as well as in any other. The Committee was so very important that he really thought that the COUNCIL ought to be represented upon it. He noticed that the COUNCIL say that they want the Committee to act outside of itself. That is evidently to get an independent Committee—the COUNCIL having its own judgment already formed on the subject. He supposed, therefore, to carry out the design of the COUNCIL, the Committee would have to go as it is.

THE SOCIETY then passed to the scientific business of the evening.

The special order of business was the "Report of the Committee on Surgery;" and the particular subject, "The Treatment of Wounds." It was considered by the Committee after the following plan: 1st. The Process of Healing, by Dr. J. D. Rushmore, Chairman. 2d. The Open Treatment of Wounds, by Dr. Jarvis S. Wight. 3d. The Listerian Treatment of Wounds, by Dr. Geo. R. Fowler; and 4th. The Treatment of Wounds in Gynælcology, by Dr. Alexander J. C. Skene.

The subject was further discussed by Dr. Jos. C. Hutchison, Dr. B. F. Westbrook, Dr. E. R. Squibb, Dr. L. S. Pilcher, Dr. J. S. Wight.

THE CHAIR announced the death of Dr. Elijah W. Carpenter, formerly a member of this Society.

THE SECRETARY moved the appointment of an obituary committee of three, which resolution was adopted, and the following were announced as such committee: Drs. John T. Conkling, F. H. Collin and J. H. H. Burge.

THE CHAIR announced that the obituary notice in the case of the late Dr. C. H. Potter would be read by title. It is as follows:

Whereas, It has pleased God to remove by death our associate, Charles H. Potter, when just entering the prime of his life, and in the enthusiastic devotion to his professional duties;

Resolved, That the example which he left to those who came within the sphere of his influence, is one of undaunted and untiring zeal, with a conspicuous forgetfulness of self in his sympathetic attention to those relying on him for relief. That he has thus added to the honor of our profession and merits our emulation.

Resolved, That we tender our heartfelt sympathy to his family and friends in their sad bereavement.

Resolved, That a copy of these resolutions be transmitted to the family of the deceased, and entered on our minutes.

WM. H. B. PRATT,
R. M. BUELL,
ALEX. J. ROONEY,
} *Committee.*

The following gentlemen were declared members of this Society, namely: Drs. H. W. Norton, Wm. Moitrier, J. W. Fleming, and C. A. Goodspeed.

THE CHAIR stated that he was requested to announce that the Long Island Telephone and Telegraph Company had placed an instrument in the Reading Room, and that in consequence, members of the Society were placed in speedy communication with their patients in any part of the city.

On motion, Society adjourned.

Ἀσκληπιὸς

ὁ Σωτῆρ

Χαρμα μέγ' ανθρωποισι, κακων θελκτῆρ' οδυναων.

Hymns of Homer, No. XVI.

PROLIFERATIONS.

——The future conduct of The Proceedings will come up for discussion at the December meeting on the report of a committee consisting of Drs. E. R. Squibb, J. C. Hutchison, J. H. H. Burge, C. L. Mitchell, and A. J. C. Skene, appointed at the last meeting. The report cannot be outlined here, but it is sufficient to say that the decision arrived at cannot fail to be far-reaching in its influence on the well-being of the profession in this city.

The Proceedings now closing the sixth year of its publication, by its widespread circulation of the scientific work of the Society, has given an impetus to original investigation and zealous labor in our midst which can be credited to no other similar body of medical men.

To The Proceedings is due an excellent reading room, centrally located, with a large array of medical journals and a library of the latest issues of the medical press, all of which are dependent on its perpetuity.

It is to be desired that a large attendance will promote the fullest discussion of the whole subject.

——Mr. Geo. Duncan, the genial and persuasive Collector of this Society, desires it to be understood that he is making his regular visitations, and hopes that the Annual Dues may be all ready to be placed in his hands. He is, thus far, much behind in his collections, and his capacity to sign receipts has lost none of its pristine vigor. His anxiety to prove this will be made manifest to all who are in arrears.

——A Malpractice suit in Belgium, brought against a physician for the alleged improper prescription of morphia, resulted in an acquittal not only, but the plaintiff was adjudged to pay the defendant one thousand francs damages. It is reported that the action was instigated by a rival doctor.

——SPONGE-GRAFTING.—In the *Edinburgh Medical Journal*, Nov., is an article by Dr. D. J. Hamilton, Pathologist of the Royal Infirmary, showing how sponge may be planted in large and deep ulcers, and in operation wounds, and, remaining there, effect "a process of healing up." The sponge becomes "vascular," is surrounded and interlaced by organizing tissue, and ultimately disappear by absorption. The manner in which the sponge is to be maintained in an aseptic state, and the character of the wounds in which sponge-grafting will be advantageous, particularly when contraction in healing is to be avoided, are set forth in the admirable paper of Dr. Hamilton.

——ALL THE VISITING LISTS FOR 1882 are now ready, and can be had of F. B. O'Connor, Jr.

——THE LONG ISLAND TELEGRAPH AND TELEPHONE CO. have "deadheaded" an instrument in the Reading Rooms. This puts the rooms in speaking communication with several hundred points in Brooklyn, New York, and suburbs. A large number of doctors are already in line at a cost of $40 a year. This sum affords constant communication nights, days, and holidays. It has connection by special wire with the Western Union and District Telegraph offices.

——A NEW DISPENSARY, called the Lucretia Mott Dispensary, has been located at 315 Atlantic Avenue, for the relief of poor women and children.

——THE LAW OF SLANDER AS APPLICABLE TO PHYSICIANS.—A paper on this interesting subject appears in the August number of the *American Law Register*, of Philadelphia. It is from the pen of Mr. W. H. Whittaker, attorney at law, of Cincinnati, and it teaches its lesson from a very good text. He says:

"There is, perhaps, no class of professional men more subject to abuse, and, it is believed, more powerless to obtain redress, than physicians. About clergymen the law has thrown its protecting arm, and public opinion has been wont to overlook, if not pardon their shortcomings. The clergyman is a sort of privileged person, whose character is tried before and whose conduct is regulated by ecclesiastical tribunals to which the courts of law have relegated it. Lawyers can take care of themselves."—*Lancet and Clinic.*

——The Regular Monthly Meetings of the Medical Society of the County of Kings are held at 8 P.M. on the third Tuesday of each month, at Everett Hall, 398 Fulton Street.

The December meeting will be held on the 20th. The papers will be announced on the card.

Nomination of officers for 1882.

MEDICAL SOCIETY OF THE COUNTY OF KINGS.

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A. Sherwell,
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Chap. XI., Art. 2, of By-laws: "Any Member elected as Delegate to the Medical Society of the State of New York, who shall be unable to act as Delegate during two successive years, shall be considered to have vacated his position as Delegate

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PROCEEDINGS

OF THE

MEDICAL SOCIETY OF THE COUNTY OF KINGS.

VOL. VI. JANUARY, 1882. No. 11.

CHRONIC RETENTION OF URINE IN ELDERLY MEN.

BY J. W. S. GOULEY, M.D., N. Y.

Mr. President and Gentlemen of the Medical Society of the County of Kings: When you did me the honor to invite me to read a paper to your Society, I was at loss to find a subject, but remembering that about two years ago* I had begun the publication of some lectures upon retention of urine in elderly men and that I was prevented, by other engagements, from preparing more than one, it occurred to me to write an essay complementary to the publication in question, and offer it to you for comment and criticism. In the paper of 1879 I gave a brief summary of the nature, diagnosis, and treatment of acute retention. I shall now hope to do likewise regarding chronic retention or stagnation of urine in elderly men.

Various authors, notably Civiale and Phillips, object to stagnation of urine from inertia of the bladder being "confounded" with retention of urine. Phillips makes this distinction, which he considers important: Stagnation of urine, he says, is *always* the result of a diminution of the expulsive power of the bladder, while retention is *always* caused by a material obstacle—such here, for instance, as an enlarged prostate. But in the very next sentence he calls attention to the fact that stagnation is one of the sequelæ of retention of urine—meaning, I presume, acute retention. Is not stagnant urine in the bladder retained urine, and is not the urine stagnant in chronic retention? The one, of course, implies the other, and either term may be used, but I prefer chronic retention, because it is opposed to *acute* retention.

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* Medical Record, Aug. 23d, 1879.

If the question were asked why should such designations as acute and chronic be used in treating of retention of urine, my answer would be that it is because the distinction is not only convenient and logical, but of much practical importance, and that the difference between the two is sharply enough marked to warrant the use of the adjectives. The one being sudden in its invasion and extremely painful, principally in the region affected; the other gradual, insidious, and accompanied with dull, obscure pains, often referable to distant parts.

In order that the points of difference between acute and chronic retention of urine may be better seized, I have placed side by side the more important and distinctive features of each variety.

Acute retention of urine manifests itself suddenly, becomes complete in the course of a few hours, and from the first moments of its occurrence the patient is conscious of its existence by very great pain and constant desire to urinate.	Chronic retention of urine is a slow and insidious process, by which the bladder often becomes gradually over-distended without the patient's being aware of the fact. This retention may not become complete for weeks or months, or it may always remain incomplete.
In acute retention, within the first forty-eight hours, the bladder preserves its full sensibility and contractile power, except in cases of injury of the spine followed immediately by paralysis.	In chronic retention there is always loss of power of contraction of bladder with impaired sensibility.
Acute retention is always the result of a sudden obstruction to the flow of urine either at the urethro-vesical orifice, (1) from acute engorgement of the prostate, as well as (2) from spasmodic contracture of the vesical neck; or in the urethra, owing	Chronic retention arises— 1. From gradual, progressive, but often incomplete closure of the urethro-vesical orifice by an enlarged prostate. 2. From atony of the bladder which has not been the outcome of prostatic enlargement, but of a

(1) to congestion at the site of a narrow stricture, (2) to the lodgement of a plug of muco-pus in the narrowed canal, or, (3) to the impaction of a calculus.	urethro-vesical muscular valvule, of a urethral stricture, of a stone, or of tumors of the bladder, etc. 3. From neglected acute retention. 4. It also results from such disease or injury of either of the great nervous centres as may give rise to loss or impairment of innervation of the hollow organs. In this last named class of cases, there is not at first atony but true paralysis of the bladder, and it is important to distinguish it from the others.
In acute retention, the closure of the urethro-vesical orifice is due to acute congestion, and consequent œdematous swelling of the mucous membrane.	In chronic retention, the partial obstruction of the urethro-vesical orifice proceeds from gradual encroachment by either lateral lobe or by the increasing median portion of the prostate.
In acute retention there may or may not be much prostatic hypertrophy.	In chronic retention there is usually decided prostatic hypertrophy, either of one of the lateral lobes or of the median portion; except of course in those cases of atony from a muscular valvule, from stone, from stricture, etc., or of real paralysis of the bladder.
In acute retention the congestive swelling is often the consequence of exposure to cold, or of over-indulgence in eating, drinking or venery.	Chronic retention does not generally arise from exposure to cold, etc., though it is sometimes the outcome of acute retention.
Acute retention is always immediately preceded by dysury and strangury and accompanied by the most violent straining.	Chronic retention is not always immediately preceded by dysury and strangury, as both may have begun weeks or months previously, and it is not accompanied by violent straining. Often there are no rational signs of its existence.

Acute retention very soon becomes complete—not a drop of urine flowing—then in two days or thereabouts it is again incomplete—the urine dribbling involuntarily night and day.	Chronic retention is for a long time incomplete—the urine being voided *voluntarily*, but in a small, weak stream which, every few seconds, is suddenly interrupted, then succeeded by twenty or thirty drops. This may be continued to the last, or the retention may become complete after weeks or months, to be finally incomplete with involuntary dribbling which at first occurs only at night or during sleep.
In acute retention the over-distended bladder forms in the hypogastric region a prominent, hard, tense, rounded tumor, which is very tender to the touch and easily mapped out.	In chronic retention the bladder is soft, slack, yielding, painless, and cannot be mapped out. Its palpitation gives the idea of its being a flaccid bag containing a fluid by which it is not distended—often leading the inexperienced to think that the fluid is in the peritoneal cavity and not in the bladder.
Acute retention of urine may be, although it is not necessarily, accompanied by cystitis.	Chronic retention is always accompanied by cystitis.

From the points of difference just noted it will be perceived that the two conditions in question demand separate consideration, not only pathologically, but in the matter of treatment. Before going any farther, it may be well to review briefly each of the first three varieties of chronic retention of urine. The fourth would require so much time and space that it will have to be omitted, to be taken up on some future occasion.

1.—Chronic Retention of Urine from Prostatic Hypertrophy.

The most frequent of all the causes of chronic retention of urine in elderly men, is hypertrophy of the prostate. This, as is well known, obstructs the urethro-vesical orifice in one of three ways: First, by enlargement of one of the lateral lobes in the direction of the bladder or of the urethra (unilateral hypertrophy); secondly, by a single rounded or crescentic valvular projection of the middle portion (centric, or better, as Mercier terms it, supra-montanal hypertrophy); and thirdly, by hypertrophy of both lateral lobes and the middle portion (general hypertrophy with a central tumor or a crescentic valvule). When the lateral lobes only are equally hypertrophied (equilateral hypertrophy) without cystitis, there is no stagnation of urine. The prostate increases so slowly that at first it gives rise simply to partial obstruction. A little urine—an ounce or two—remains behind in the basfoud; this creates sufficient irritation to cause the bladder to make frequent contractile efforts to expel it, and to wrestle, as it were, for a time with the obstacle. This constant wrestling of the bladder against the obstacle—so well described by Mercier—causes hypertrophy of its muscular coat. By and by, after the lapse of many weeks or months, as the obstacle becomes greater, the expulsive efforts are less vigorous, the bladder becomes sluggish, and still fails to expel the last few ounces of urine, which soon decomposes and creates a subacute inflammation of the vesical mucous membrane, which is not unfrequently propagated to the connective tissue of the whole thickness of the organ (interstitial cystitis), resulting in sclorosis of this connective tissue. There follows impairment of sensibility as well as of expulsive power on the part of the bladder, which is then said to be in a state of atony. Often the patient is not conscious of the existing distension of the viscus. He is able, by the assistance of his abdominal muscles, to void a little urine in a small stream at frequent intervals, or the urine may slobber out constantly, and by this he is deluded with the idea that he is "passing too much water." The urine—more of which is secreted than can be expelled—slowly but steadily increases in amount to the extent of greatly overstretching the already hypertrophied and atonied muscular coat, and the bladder becomes inert. This accumulation of decomposing urine not only gives rise to inflammation of the whole mucous membrane, but to ulceration, and sometimes even to perforation of the bladder. You perceive that I make a distinction between atony and inertia. The two terms are usually employed synonymously, but they most certainly do not mean the same thing. Atony of the bladder strictly means want of tone, want of strength; it implies sluggishness, impairment of contractile action of the muscular coat, but there still remains a certain degree of contractile action; while inertia signifies abolition, total loss of contractile power, which may be temporary or permanent. A bladder is in a state of inertia as long as it is over-distended, but as soon as the urine is removed, contraction follows, and the inertia ceases. Atony and paralysis were formerly also confounded, but in our days the difference between the two is fully appreciated. An atonied bladder frequently becomes inert, a paralyzed bladder is *always* inert, yet inertia does not necessarily imply either atony or paralysis in its true sense. Atonied bladders are often curable, and cured, while paralyzed bladders

(I mean paralysis caused by a lesion of the brain or spinal cord) are never cured, unless it has been possible to remove the cause, and speedily too.

2.—Chronic Retention of Urine Due to a Muscular Valvule, Urethral Stricture, Stone, Tumors of the Bladder, etc.

Narrow urethral strictures of long standing frequently cause chronic retention of urine, and the pathological changes that give rise to this trouble are very much the same as those described under the head of chronic retention from prostatic enlargement; the main difference being that the obstruction is in the urethra proper instead of the urethro-vesical orifice. There is the same wrestling with the obstacle which leads to hypertrophy of the muscular coat of the bladder, to atony and stagnation of urine and to crystitis. According to Mercier, such cases in time have a second obstacle, at the urethro-vesical orifice, which he has named "muscular valvule," in contradistinction from the "prostatic valvule."

Stone in the bladder gives rise to chronic retention of urine by first causing cystitis, not only of the basfoud, but of the vesical neck, in consequence of which spasmodic contracture takes place of the muscular fibres that form the normal urethro-vesical valvule of Mercier, and when this contracture is permanent the muscular valvule may be said to exist. This valvule is sufficient to act as a barrier which prevents the complete spontaneous emptying of the bladder, and the result is stagnation or chronic retention of urine. Before Mercier no one had ever accounted for the stagnation of urine which sometimes continues even after the removal of a calculus by lithotripsy, still less for the occasional complete relief of this stagnation by lithotomy; for in lateral lithotomy the valvule may be divided and afterwards the patient is able to empty his bladder. The dilatation of the urethro-vesical orifice obtained in modern median lithotomy may also afford some relief.

Tumors of the bladder—even those that do not at times directly close the urethro-vesical orifice—also by giving rise to cystitis—which is often sooner or later followed by a muscular valvule—cause chronic retention of urine and atony. In fine, anything which will excite the development of a muscular valvule is an indirect cause of chronic retention of urine.

3.—Chronic Retention Arising from Neglected Acute Retention.

Chronic retention of urine, in an elderly man who has little if any appreciable prostatic enlargement, may, as you know, follow an attack of acute retention which has remained unrelieved for two days or more, and which has received no adequate subsequent treatment. That is to say, nothing more than the one catheterism by which the bladder has been emptied. What has then ensued is atony of the bladder from the sudden overstretching of its muscular coat, which, in consequence of this overstretching, may become atrophied. It is, however, only when the bladder is thus suddenly overstretched, or suddenly paralyzed, that atrophy of its muscular coat can possibly follow. This atrophy must be of extreme rarity, since Mercier, with his powers of close observation and his immense experience, had seen, up to the year 1854, only one case which might pass for atrophy of the muscular coat of the bladder. The patient was seized with acute retention of urine from the sudden sinking down of a prostatic tumor upon the urethro-vesical orifice. He died soon after. The bladder was found distended, and its walls were inordinately thin. Upon the posterior border of the urethro-vesical orifice was the tumor, the size of a cherry, which had caused the sudden retention of urine. In commenting upon the case he says : "May not this tenuity of the vesical walls have been more apparent than real, and may it not have resulted simply from the sudden distension caused by the sudden depression of the urethro-vesical tumor, without antecedent dysury and hypertrophy?" He regards this case as one of exceptional rarity, and does not admit the existence of primitive, essential atony, with atrophy of the muscular coat. While he fully recognizes sudden and continued distention of the bladder as a cause of atony of its muscular coat, he considers this atony as most frequently the consequence of inflammatory action resulting from stagnation of the urine, which stagnation has been caused by a "material obstacle" at the urethro-vesical orifice or in the urethra, and that in this sort of atony there is almost always some hypertrophy and very seldom if ever atrophy of the coats. I believe this view to be correct, for in the very considerable number of atonied bladders of old men that I have carefully examined after death, I have scarcely ever failed to find hypertrophy of the muscular coat, with more or less inflammation of the mucous membrane.

Symptoms and Progress of Chronic Retention.

I have already said that often there are no rational signs of the existence of chronic retention of urine, especially when due to prostatic hypertrophy. When they do exist they are often misleading to the patient, and sometimes even to the medical attendant. In the earliest stages of prostatic enlargement there are no perceptible symptoms, but the moment that the urethro-vesical orifice is in the slightest degree impinged upon, there is a change in urination, so little and so gradual that the patient can remember it only after his attention has been recalled to the nature of normal micturition; after this and much cross-questioning he will finally admit that, for several months prior to the advent of those distinct and increasing symptoms, which, for two or three years past, might well have caused him some anxiety, the jet of urine had not been propelled with its wonted vigor, and that it sometimes dribbled for a few seconds after the apparent close of the voluntary act of urination, so as to wet his shirt; but he had ascribed this to advancing age, and had given the subject no further thought, and did not for a moment suppose that it could be the incipient stage of a coming serious infirmity. He will then say that for the last year or more the symptom in question has increased quite noticeably, especially when he suffers constipation, that he has been urinating with undue frequency by day and by night, that at first he was never satisfied with what came away, for the desire to pass urine was as great as if he had passed none, but that of late he had ceased to suffer during urination. The bladder had then lost the power to wrestle with the obstacle; in other words, atony had already occurred and inertia was imminent. After this a little urine was passed every hour or half hour, and then sometimes slobbered out. But even these phenomena are very often misinterpreted, for the frequent micturition, or the involuntary dribbling, leads the patient to think that he is passing too much water, and that means should be taken to repress this supposed undue flow. It is for this that he comes to consult the surgeon, and he is not a little surprised when told that this undue flow indicates retention rather than incontinence of urine.*

Often a lumbago or sciatica is the most prominent symptom of chronic retention of urine. Elderly men frequently come to consult me for sciatica who declare, when questioned, that all is right with the urinary apparatus, and at first refuse to be examined; but when the catheter is introduced immediately after four or five ounces of urine have been voided spontaneously, and a pint or more of stale urine is drawn off, they express some surprise; but it is not a little difficult to convince them that the really serious trouble is the retention, its cause being an enlarged prostate, and the sciatica only one of the remote effects. While it is proper to give some local remedy for the sciatica, the attention of the patient should be especially directed to the proper and systematic use of the catheter, otherwise the urine will accumulate in the bladder to the extent of a gallon or even more.

When a patient, who is tormented by frequent but incomplete acts of urination, obstinately refuses to seek surgical aid, his case progresses somewhat as follows: His sleep is greatly disturbed, either by these constant desires to urinate, or by the dribbling urine; his appetite fails him, and all his other functions are soon more or less impaired. Irritative fever supervenes from the existing cystitis and the steadily accumulating purulent, slimy urine. He has dull lumbar pain from distention of the ureters and renal pelves; his bowels are constipated and tympanitic; his tongue is parched, his speech is incoherent, his skin is dry (except toward the last, when it may be covered with cold sweat, partly as a result of general relaxation, partly as a final effort of nature to eliminate effete material). Very little urine is now passing away, although the bladder is still full ; the function of the kidneys becomes more and more impaired, until finally it ceases entirely. He then sinks into a state of muttering delirium, from which he is with difficulty roused, and dies from the combined effects of urinous, purulent and fecal intoxication.

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* The profession owes a debt of gratitude to Dr. Mercier for having correctly interpreted this phenomenon, which, before his teachings became known, was supposed to be incontinence of urine. Indeed we are indebted to Dr. Mercier for nearly all of our present more exact knowledge of the pathology and treatment of diseases of the urinary organs.

The pathological lesions usually found in such cases are : A well-marked urethro-vesical obstruction ; an atonied, columnar, thickened bladder, containing a quart or two of chocolate-like, fetid, slimy urine ; this having been washed away, the mucous membrane is brought to view and shows signs of long-continued inflammation; the ureters dilated to an inch or more in diameter ; the pelves of the kidneys distended with slimy urine to three or four times their normal capacity, and the kidneys themselves in a state of interstitial inflammation with many abscesses.

I have omitted to mention another lesion of the bladder consequent upon stagnation of urine. It is sacculation, which occurs in two forms. 1st. A single pouch of from half an ounce to eight ounces in capacity, or there may be multiple diverticula, from three to six in number. 2d. Numerous small sacs, containing from a few drops to a drachm or two of urine, like so many herniæ of the mucous membrane thrust outwardly between columns of the muscular fibres. The stale urine lingers more or less in the sacs, particularly in those which, by reason of their obliquity and small orifice, are never completely emptied, and ulceration begins in the bottom of one or more of them, and extends itself through the outer coats, ending in what Mercier has designated as spontaneous perforation of the bladder. In that case peri-cystic abscesses are the result, or some urine makes its way into the peritorical cavity, or is infiltrated in the pelvic connective tissue. I have dissected one case in which there were two peri-cystic abscesses on the right side of the lower fundus, and another where the perforation had taken place in the recto-vesical cul-de-sac.

Diagnosis.

The diagnosis of chronic retention of urine is often difficult, and is sometimes never made. This ailment has been confounded with peritoneal dropsy, "abscure abdominal tumors," cancer of the liver, or of the omentum, hydronephrosis, hydatids of the liver or omentum, etc. A distinguished physician who knew a patient to be affected with prostatic hypertrophy, thought the immense distension of the abdomen, of which the patient was suffering, to be due to malignant disease. In the course of a week a catheter was introduced and a sufficient amount of urine drawn to cause the sudden disappearance of the "malignant abdominal tumor."

Let me now cite, briefly, a most interesting case of chronic retention of urine, of at least three years standing, in which no diagnosis was made until the bladder was accidentally punctured. The patient was a man of slight build naturally, but had of late become somewhat emaciated. He was seventy years old. I saw him a little over two years ago in consultation with a medical gentleman of New York, who gave me substantially the following account of the case:

The patient had three years before noticed a marked protuberance in the hypogastric region, which he had ascribed to constipation, although he urinated with increased frequency during the day, and several times at night. The real difficulty, he thought, was the constipation, for which, and for the peculiar swelling of the belly, he had consulted several physicians. He had been under the care of the physician with whom I saw him for about twelve days. The doctor finding fluctuation, thought the disease cancerous, or hydatid, and this opinion was concurred in by a senior practitioner. The attending physician, feeling a little more secure on the side of hydatid cysts, on the fourth day made a puncture, two inches below the umbilicus, with a small trocar, and aspirated nine and a half pints of a light-colored fluid, some of which he took home, expecting to find in it the characteristic hooklets, but instead he found crystals of uric acid, pus and vesical epithelium. This fluid was urine, and the trocar had entered the bladder, which had risen high above the umbilicus, and had projected so far forward as to resemble a morbid outgrowth. The catheter was not resorted to until twenty hours after this sudden aspiration of the contents of the distended bladder, then four and a half pints of bloody urine came away. Polyuria supervened, and still the catheter was introduced but once every twelve hours, each time drawing off four and a half pints, for four days, when the quantity of urine began to decrease. When I saw the patient I advised catheterism every six hours, but his condition was such that I gave a bad prognosis, expressing the opinion that he had but few weeks to live. My diagnosis was chronic retention of urine from bilateral and supra-montanal hypertrophy of the prostate. He died in the course of a couple of weeks, and I was invited to the autopsy. The only diseased organs were the genito-urinary, from the prostate to the kidneys.

It is not an uncommon thing for surgeons who have much to do with urinary diseases to be consulted by elderly patients, all of whom tell nearly the same story: "For several years past I have been variously treated for a urinary trouble, which has been to me and to my physicians quite obscure. I pass enough urine, and frequently too, I have been sounded for stone but none found; I have no gravel in the urine, my kidneys are said to be sound, etc., but I am conscious that something is wrong. Will you, sir, tell me what is the matter and what can be done for me?" While the patient is speaking everything is made ready; he is first required to urinate, and try his best to empty his bladder. The catheter is then introduced, and from two ounces to a pint or more of purulent stale urine is drawn off, confirming the diagnosis of chronic retention of urine.

TREATMENT OF CHRONIC RETENTION OF URINE.

The surgical treatment of chronic retention should consist (1) in withdrawing the offending urine, (2) in relieving the existing cystitis, and (3) in endeavoring to remove the obstacle to the spontaneous expulsion of the urine.

When the retention is due to stricture, successful evacuating catheterism, followed by the enlargement of the urethra—by dilatation, divulsion or urethrotomy—to or beyond its normal capacity, and by suitable irrigations of the bladder, will be sufficient, as a general rule, to cure the retention, the atony and the cystitis; but to prevent their recurrence, dilating catheterism will be required periodically (not less than once a week) for several years; otherwise the stricture will re-contract and produce those first effects. I shall be equally brief with respect to the treatment of chronic retention arising from spasmodic contracture of the neck of the bladder or from a muscular valvule, and only say that the catheter should be used three or more times every day, to be followed by appropriate urethro-vesical irrigations. If these means fail, internal incision, or in exceptional cases excision, of the valvule will be indicated.

If, when chronic retention is the result of supra-montanal hypertrophy of the prostate, it be discovered early, and ordinary skill and judgment be exercised in the case, it will progress quite satisfactorily for a great many years. In certain cases of complete obstruction, if the patient has been properly taught to catheterize himself, he will rely entirely upon the catheter for relief and never think of urinating spontaneously. I know several elderly gentlemen, now in good general health and quite active, who themselves have been using the catheter five and six times daily for the last five, ten, and twenty years. But these successes are due to early beginning and to the greatest care in the use of the instrument, in spite of which an occasional attack of orchitis occurs.

I am sometimes asked what is the proper catheter, what kind of catheter should be used by those who cannot urinate owing to a urethro-vesical obstruction? My answer is invariably that no one kind of catheter is THE catheter. The same catheter will not suit all cases any more than the same glove will fit all hands. If any or all catheters answered equally as well in all cases, the surgeon's occupation would be gone. There would be no necessity to discuss the subject.

First let me express my own convictions as to the catheters the use of which should in general be avoided. All metallic and very rigid non-metallic catheters or soft catheters armed with stylets, should not be used under ordinary circumstances. If such instruments had never been employed to relieve retention of urine from prostatic enlargement, cases complicated with false passages, now so common, would be of extreme rarity. I have never owned what is usually called a silver prostatic cathether, nor have I ever seen a case which I could regard as requiring such an instrument. The difficulties which arise from catheterism with metallic or rigid non-metallic instruments, are encountered, 1st, at or near the bulbo-membranous junction of the urethra from an inordinately deep sinus of the bulb, undue force causing the point of the catheter to perforate the mucous membrane and enter the spongy tissue, or to plough its way between the membranous urethra and rectum and sometimes even enter the intestine. This accident makes itself manifest by a more or less copious urethrorrhagia; 2d, in the sinus of the prostate. This latter impediment is formed by a urethro-vesical barrier causing a deep pouch in the prostatic sinus. In this case, the same undue force may give rise to a longitudinal rent on one side or the other of the floor of the prostatic sinus, extending to or into the barrier, or else the point of the catheter penetrates and sometimes transfixes the barrier at its centre. Such serious injuries are not generally inflicted with soft non-metallic instruments, though when their eyes are improperly constructed they cause considerable irritation and even erosion of the mucous membrane. Therefore one of the prime requisites of a good catheter is an eye as small as practicable, with perfectly smooth rounded edges. It should never have two eyes.

The size of the catheter is also worthy of consideration. Nearly all those who practice auto-catheterism have a predilection for small catheters, such as Nos. 4, 5, 6 English. This is a great mistake. The catheter should seldom be under No. 9, which, though it may be pliable, retains a certain degree of firmness and can be much better managed. If it seems too large the surgeon should dilate the urethra; indeed it is an excellent practice every few months to put the patient's urethra through a short course of dilatation, to No. 13 or 14, if a No. 9 is afterwards to be used, as this canal will contract from the inflammation induced by the five or six daily catheterisms when these have been continued for months or years. In this condition of stenosis the introduction of the small catheter will become more and more difficult, if not impossible, and will cause hemorrhage and other mischief. In cases where false routes have been made, I have advised the use of catheters as large as No. 15 English, which the patients are now introducing with the greatest ease, while before they had constantly failed with smaller instruments. Of course, in giving such advice, the surgeon must be guided by the normal size of each patient's urethra.

The length, too, of the catheter is a matter of some consequence, but in the majority of cases nine or ten inches will do; while in extreme cases, and for special purposes, as will be seen presently, eighteen inches are required. The ordinary soft catheter is fourteen inches in length, and this is perhaps the most convenient, especially where irrigations have to be made.

The non-metallic soft, commonly called gum catheters, now in use, are made of strong silk braided over a proper mould, and coated with a highly elastic varnish; or of vulcanized India-rubber. Formerly we relied upon England and France for our supply of catheters, but now the very best, far excelling any that have ever been imported, are made in the city of New York by Bénas' Son, who changed his residence from Paris to New York, where he began this industry in the year 1880. The best vulcanized rubber catheters—velvet-eyed*—are to be found at Tiemann's, and those open at their vesical extremity, and without lateral eye, at Ford's.†

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* Soft India-rubber catheters have been known for twenty years or more, but comparatively little used until the last eight or nine years. The first were of pure rubber, and so flaccid that they easily collapsed. On this account they were soon set aside, to be replaced by the more firm vulcanized rubber, but even these gained little favor for many years. Their unpolished surface and clumsy form caused them to be rejected by the great majority of surgeons. Voillemier gave to rubber cathcters a short notice in his book, published in 1868, condemning those made of the pure gum, and objecting to the vulcanized rubber on account of their too small bore, and too great flexibility. Maisonneuve, however, seems to have used them with more persistence than any one else, and to have urged some of the subsequent improvements. But the better qualities were brought to this country under the name of Nélaton's catheters. In my work on diseases of the urinary organs, published in 1873, pp. 385 and 386, I ranked the various instruments for evacuating catheterism of the bladder in cases of enlarged prostate as follows: 1st, the English gum catheters over-curved; 2d, the French monocular soft olivary catheters; 3d, the soft vulcanized tan-colored India-rubber catheters (Nélaton's), and (p. 292), occasionally, Mercier's soudes *condées* and *bi-condées*. Experience has since taught me that I had undervalued these instruments of Mercier, as well as the India-rubber catheters, which I was induced to try again more extensively by the late Doctor John D. Jackson, of Danville, Ky., who gave an account of them in a letter, dated April 20th, 1873, published in the Richmond and Louisville *Medical Journal*, for June, 1873, pp. 681 and 685. Doctor Jackson's publication has, I think, done much toward popularizing the rubber catheter in the United States. The first vulcanized rubber catheters received by Tiemann & Co. from France

The form of the vesical end of catheters also has its practical bearing. The straight is worse than useless, for with it false routes are often made, except in the case of the soft vulcanized rubber catheter, which answers well in uncomplicated prostatic enlargement, that is to say, where there are no false routes, and also when the supra-montanal growth is not very large, it will worm in its way in cases of lateral intra-urethral hypertrophies, but will always fail in great supra-montanal development. It is one of the best for auto-catheterism in simple cases, provided that no kind of stylets be used. I formerly employed the olivary French catheter with long shank, but now seldom do so. I then also used the English catheter over-curved, but found that this curve would soon be lost, and that with age the instrument became brittle. While in Paris, in 1878, I got Messrs. Chose & Frère to braid for me some silk sheaths on curved moulds, and coat them properly, but they sent me only a few samples. Bénas' Son, of N. Y., has lately made me some of these same curved catheters, which I now use in place of the English, and I find them very useful in some cases of supra-montanal hypertrophy and for auto-catheterism, but the elbowed and double-elbowed catheters of Mercier have no equal in a large class of cases, particularly in excessive development of the supra-montanal growth. But there are cases complicated with false

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were so poorly made that I seldom used them; nor did I use Holt's winged catheters, which were made of the same coarse material; but on the advent of the smoothly-polished instruments made by Jaques, I felt satisfied, after a few trials, that they answered better than any that I had before employed, and I have since recommended them as safe catheters for general use, even by patients themselves, as no particular skill is required for their introduction. But these, like the first, have a serious defect in the eye, whose abrupt and sharp edges cause no little irritation in the urethra. This defect was at once recognized and complained of by all surgeons and by patients, but the cutlers always said that it could not be remedied; that as the eye had to be made with a punch, the edges could not be so rounded or blunted as to prevent urethral irritation. Sundry means, to blunt the edges of the eye, were afterwards tried—as, by filing, the application of a red-hot wire, etc.; but, so far as I know, they have not been successful. For more than three years I constantly called the cutler's attention to the matter, especially Mr. Stohlmann's, of the firm of Geo. Tiemann & Co., saying that the eye of the catheter must be made in some other way than by punching; that it should be constructed simultaneously with the body of the instrument; and that the mould must be so contrived as to turn out the catheter with the edges of its eye perfectly rounded. The answer was always, "Impossible, Doctor; it cannot be done." In the latter part of the summer of 1876 I made a final appeal for a good rubber catheter to Mr. Stohlmann, who promised to "try again in earnest." He then began a series of experiments, which resulted favorably; and, in February, 1877, brought me the long-wished-for instrument, which is now in the market under the name of "the velvet-eyed catheter." Shortly after this the same firm showed me specimens of

† Caswell, Hazard & Co.

routes in which all these instruments fail. Even Hey's method, in these circumstances, is found wanting, and recourse must be had to Mercier's invaginated catheter, with which alone an entrance can be effected.

Chronic retention of urine of a few months' standing is quite amenable to treatment, especially in well-nourished patients, who are otherwise in fair physical condition ; but in those who, for two or more years, have been neglected, and whose general health is, in consequence, much impaired, the prognosis is ordinarily bad; for after this lapse of time the ureters and kidneys are irreparably damaged, and the most that can be done is to mitigate suffering.

In a case in which there is every probability that the kidneys are not involved, if the bladder has been in a state of distention for several months, the first step in the treatment is to draw off the urine, but this must be done with great care, very slowly and by degrees. Many years ago, Sir Benjamin Brodie pointed out very graphically some of the evils which arise from the sudden evacuation of the distended bladder in elderly men, but these facts are too well known to be now rehearsed. A few years ago I suggested a plan by which the whole of the offensive contents of the long-distended bladder can be safely removed at one sitting,

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elbowed rubber catheters, and also some others with a countersunk opening at the point, instead of the usual lateral eye, which they had made experimentally on the plan of Desault's catheters, open at both ends. Since then Mr. Ford has caused to be manufactured similar catheters, but much more highly polished.

I am not yet satisfied with any of the rubber catheters. Each of the rival makers has produced a catheter which possesses at the same time excellent qualities, and serious defects. Tiemann's velvet-eye is very good in itself; the catheter has a good firm body, with sufficiently thick walls, but its surface is insufficiently polished. The catheter made in Boston for Mr. Ford has a highly polished, vitreous surface, but its body is too flimsy, and its opening at the vesical extremity has sharp edges instead of the smooth, rounded edges of the "velvet eye" of Tiemann's instrument. If the good qualities of the two instruments could be combined in their manufacture, very excellent catheters could then be produced—smooth, firm, and with a good eye, or a properly-constructed vesical extremity. It is to be hoped that the two firms will come to some understanding and give us what is so desirable, even if it be at a higher price. The rubber catheters, as they are now, cannot successfully compete with Bénas' Son curved gum catheters.

I have found that fixed oils are extremely injurious to vulcanized India-rubber catheters. They are also damaged by urine. Hence the necessity of thoroughly washing the instrument every time it is used, and of employing vaseline or cosmoline as a lubricator, which has the effect of preserving the catheters, while ordinary oil causes their rapid deterioration.

Since the above was printed, I received from Tiemann & Co. some rubber catheters which show a great improvement over those made before; the surface is much better, but is not yet sufficiently polished. Among these instruments, is a conical, solid, but quite pliable, India-rubber bougie, which, I think, will do good service in the dilatation of urethral strictures.

no matter what the amount may be. In order to make the modus operandi intelligible, let us suppose a case in which the bladder is distended, so that its fundus rises above the level of the umbilicus. A catheter is introduced and a pint of fetid, purulent urine is slowly drawn off. Immediately half a pint of borax solution—two grains to the ounce, with five minims to the ounce of wintergreen essence—is thrown in, then another pint is allowed to flow out through the catheter, and half a pint more of the borax solution is injected. There is already one pint less of fluid in this bladder, and what remains is mixed with a disinfectant. After this, for every half pint of diluted urine drawn off, half a pint of the borax solution is injected, until the fluid that escapes from the catheter is perfectly clear. Once every four hours afterwards, half a pint of the clearer contents is removed, until the bladder is entirely empty, which may take two, three or four days. Then twice daily irrigations of the bladder, with the borax solution, should be made to relieve the cystitis.* The catheter to be employed four times each twenty-four hours, unless the patient can pass some urine spontaneously. If such is the case, two or three daily catheterisms may suffice.

It is important to persevere in the daily artificial evacuation of such bladders, and to thoroughly irrigate them, for unless this is done the cystitis will not only continue, but give rise to the formation of calculi, which increase in size very rapidly, and after their complete removal are very soon reproduced, and are of very difficult access when lodged in pouches.

In case catheterism is impeded by the existence of false routes, a Mercier double-elbowed catheter, large enough to fill the urethra but not to stretch it, is often successful, the size preventing the point of the instrument from lodging in the false route, it slips over and enters the bladder. Another frequently successful method is that of Wm. Hey, of Leeds. It consists of introducing as far as the obstacle, but not into the false route, a good-sized firm "gum" catheter armed with a solid curved metallic stylet. The stylet is slightly withdrawn while at the same time the catheter is pushed onward, with the effect of tilting up its point, and it passes over the mouth of the false route and into the bladder. I have resorted very many times to this simple maneuvre, and am well pleased with the results it has generally given, but I have also failed with it. Then I have had recourse to Mercier's invaginated catheter, and this final trial has always been crowned with success. The invaginated catheter consists of two catheters, one of gum (so called), the other of metal.

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*At the suggestion of Mr. Harrison, of Liverpool, I have, for the last six months, used water at a temperature of from 100 to 120° F. to irrigate, in the cystitis from urethro-vesical obstruction, and in some cases have found it of great service.

The metallic part I would call the female, the gum, the male. The female part is made of a thin No. 10 English silver tube, eleven inches long, very slightly curved, and having, on its concave side, three-eighths of an inch from its point, an oval opening or eye five-eighths of an inch in length and three-sixteenths in breadth. From the vesical extremity of the eye is an inclined plane which is lost in the floor of the opening at the distance of a quarter of an inch, serving to tilt up the point of the male part. The male part is a flexible but firm gum catheter (not India-rubber; this would be worthless), No. 7, and eighteen inches long, fitting rather loosely in the lumen of the female part, and having a single eye one-eighth of an inch from its point. This eye may be dispensed with and the vesical end of the instrment left open.

The mode of using the invaginated catheter is, after proper lubrication of both, to introduce the male into the female part deeply enough to close the eye of the latter, then to pass the instrument thus armed as far as the obstacle, and deliberately engage the point of the metallic part in the false route, and finally project the male part, which will override the false route thus blocked and enter the bladder. If no urine flows it is probably owing to the impaction of a blood clot in the eye of the male part. A little water injected into this catheter will remove the clot and the urine will flow. The female part can then be withdrawn and the male left in as long as may be required; this is the reason for the increased length given to the male part.

When catheterism is supposed to be impracticable it has been the custom for many years past to puncture the bladder with an ordinary trocar, an operation now as unjustifiable as it is unsurgical. Mercier, after an experience of nearly half a century, says that he has never found it necessary to perform this operation and regards it as belonging to the infancy of our art. I, too, am happy to say that I have never practiced puncture of the bladder with the ordinary trocar. I have in some cases resorted to supra-pubic puncture with a capillary trocar and used Dieulafoy's aspirator to pump out the urine, but after sufficient experience and close observation of the results of this operation, I have come to the conclusion that it is not as safe as it seemed to me at first, and should be reserved for cases of the greatest emergency, and in acute retention only—chronic retention has waited and can wait a little longer. I know of several deaths that have resulted from the escape, through the eye of the hollow needle during its withdrawal, of a drop or two of urine, which, entering the connective tissue, produced vast abscesses between the bladder and anterior abdominal walls, where, too, the greatest care had been observed throughout the whole process. This occurred in a case operated upon by myself, and I have no doubt that the same accident has happened to many others.

Removal of the Obstacle.

To remove the obstacle to spontaneous urination, when this obstacle is due to prostatic hypertrophy, is no easy matter; often it is impossible. Guthrie gave the original hint, but no surgeon has labored so earnestly and so long to solve this difficult question as Mercier. He was the first to describe and perform a suitable operation. The obstacle at the base of the prostate is removable by incision or by excision, which respectively I have named prostatotomy and prostatectomy, external or internal, as the case may be.

In my opinion these operations should be restricted to cases of crescentic valvules and to bars of not more than a centimètre in thickness. I do not think them applicable to large rounded sessile tumors and to certain other forms of hypertrophy. The external operations are destined to accomplish great results in cases of urethro-vesical obstructions complicated with false routes. I shall not say more at present on this subject, except that in the last two years I have operated seven times and only once before, in all eight cases, of which one died.

DISCUSSION.

Dr. J. C. Hutchison: There are several points of special interest in the paper, to which I will briefly refer. One is, the importance of having a catheter long enough to enter the bladder in case of enlarged prostate. The ordinary catheter, fourteen inches long, is usually sufficient, but there are cases where catheters have failed to enter the bladder simply because they were not long enough. Then a catheter sixteen or eighteen inches has been passed and the urine was discharged readily. This is an important practical point, for we know that the urethra is considerably elongated in many cases of enlarged prostate and especially in enlargements of the so-called third lobe of Sir Everard Holmes. This term has gone out of use in a great measure, yet it has been in surgical nomenclature so long that it is probably well to use it. Another point of interest to me, is the importance of using instruments early in chronic bladder irritation of elderly men caused by an enlarged prostate gland. I am inclined to think that as soon as a man of fifty-five years of age or thereabouts begins to micturate more frequently than he has been accustomed to, it is well if he consults a surgeon early, and they do not always do so until the symptom is very troublesome, to use the cathether. But, as Dr. Gouley says, they do not come under observation, until they consult the surgeon for what is supposed to be a profuse flow of urine. They have interpreted the frequent micturition to mean that they are discharging an abnormal quantity of urine. Whereas, if they measured the quantity discharged they would find that they are not discharging as much as usual. I think that in all these cases, it is best for the surgeon to examine the patient at once with urethral instruments, and through the rectum, and if he finds an enlarged prostate causing the trouble, even if there is no residuary urine, it is a good plan to show that man how to use the catheter, and advise him to do so at least once in twenty-four hours, for sooner or later he will have residuary urine, varying in quantity from two to eight ounces, or even more. This residuary urine, unless the bladder is relieved of it, will undergo decomposition, ammonia is evolved, which produces cystitis with all its distressing symptoms, and is gotten rid of with difficulty, unless it arises from some cause which can be removed, as stone in the bladder, etc. I feel disposed to urge strongly the adoption of this suggestion. Sir Henry Thompson has, I believe, called especial attention to the importance of using the catheter early in enlarged prostate, in order to prevent the development of cystitis from residuary urine, and not wait until it has developed. Another thing, to which I desire to allude, is that one kind of catheter will not suit all cases, so that it is necessary to have a variety of instruments. I have sometimes found Squire's vertebrated catheters answer best, sometimes the Jacques catheter, sometimes Mercier instrument turned up at the end, sometimes the silver prostatic catheter with a large curve. A man who has neglected his bladder until he has cystitis from residuary urine, is doomed to the use of the catheter for the remainder of his life, and in some cases no urine can be discharged without the introduction of the catheter. I recently had a case of that kind in which I did Bigelow's operation for stone. This gentleman could not pass a particle of urine without the use of the catheter. In this case the formation of the calculus was due to cystitis, not an uncommon occurrence.

The fact that a man is doomed to the habitual use of a catheter is a very serious matter. The patient will often get epididymitis and urethritis from the use of the instrument. Now the accepted method of treating a case of chronic retention from enlarged prostate is to draw off the residuary urine, and to irrigate the bladder as often as necessary, so as to make them comfortable. But we do not make them comfortable after all. We only diminish their discomfort. I have been for some time looking for an addition to our therapeutical measures in these cases, in the direction of operative surgery, and I am very glad that Dr. Gouley has directed our attention to Mercier's operation, and I am sorry, however, to hear of the success he has attained, that it is adapted to so comparatively a limited number of cases, *i. e.*, where the obstruction is not large. In cases of obstruction from enlarged third lobe which acts as a valve, may we not consider the propriety of excision of the third lobe by external perineal incisions? In some of these cases, although the retention is acute and complete, it has been preceded by a chronic condition, and it is impossible to introduce any kind of catheter. What are we to do, then? Gouley has spoken against the use of the aspirator. Now, in cases where we cannot possibly introduce the catheter, which are very rare, we must use the aspirator, or puncture through the rectum. This is better than to leave the patient unrelieved, and it is our duty to give patient the benefit of the operation.

Two or three years ago, I think in 1878, the *British Medical Journal* contained an account of a case reported by Dr. William, of Norwich, England, which bears upon this subject. In performing lithotomy in the case of an old man, he pinched off with the lithotomy forceps a large piece of the third lobe of prostate. There was considerable hæmorrhage after the operation, but the result was entirely satisfactory. He was relieved from the disagreeable troubles which preceded the operation, seldom finding it necessary to micturate more than once during the night. Mr. Cadge, of Norwich, England, has also reported several cases where the prostate has been removed accidentally by being caught in the forceps between the stone and the blades; and the result in these cases has been satisfactory. Three or four years ago I saw a patient, a boy who had an enlarged prostate. He was 17 or 18 years of age. The age of the patient made it a unique case so far as my experience went. He had great difficulty in passing the catheter. I believe he had an enlarged third lobe. I determined to try to give him some relief. He was a vigorous young man. I made an incision in the perineum as for the median operation in lithotomy. I carried in a probe pointed bistoury and sliced off a piece of enlarged gland. Unforunately, however, I was unable to know what would have been the result of the operation on the flow of urine, for the patient died of septicæmia. As I said before, it seems to me that we must look in the direction of operative surgery for some more rational method of treating these cases.

Dr. J. S. Wight: I wish to say a word or two in regard to some suggestive hints the author of this paper has thrown out in regard to treatment, and also to refer to one case of a number of cases which have come under my observation.

It was in the month of December, 1874, that the case came under my notice. He was 84 years of age, an artisan, born in Scotland, and a vigorous, healthy man. I think it is important in all our cases to determine that point. He had never been sick, but he had for some time what the author of the paper appropriately calls chronic retention of the urine; but, in addition to that, at the time I speak of, he also had acute retention, if I understand the author's remarks upon that subject. It seemed to me, as I was called to see the case, a kind of acute congestion or inflammation—or, if I were to speak figuratively, I should call it an acute tonsilitis of the prostate gland, or something to that effect. The peculiarity of this case was, that nobody could get any kind of an instrument in the bladder through the urethra. The surgeon who saw him first could not introduce a catheter, neither could I. I therefore advised a resort to the aspirator. I aspirated my patient for about a week. I made a good many punctures supra-pubic. At the end of that time I advised cystotomy. I performed the operation, and succeeded in cutting about half-way through the prostate gland, and found it one of the largest I ever saw. I could find no opening whatever. I introduced an ordinary steel director, and made for the bladder as soon as I could—and it required some force to make my way through into the bladder; at any rate, the urine came out of the wound along the groove. I put in a whalebone guide, and on this a divulsor, and divulged the prostate. After I had done, I reinserted the director, pushed my left fore-finger down, broke my way through the prostate into the bladder, making an abundant opening, and let the water run out. I fastened an instrument into the bladder and left the patient with my friend, the doctor; but the old man got very troublesome and pulled it out. I went there the next morning, and found the bladder filled up, and the passage closed. I thereupon applied the aspirator for three or four days; when the tissues were filled with plastic material, so that there would be less danger of absorption, I pushed my finger into the bladder again. Then I replaced the instrument, and the patient was prevailed upon to allow it to remain. During all this time he had no special irritative fever, or septic fever, but went on exceedingly well towards recovery, which was speedy, and the result was excellent. The prostate gland was very much diminished in size, and I left him very much better than he had been for many years.

I speak of this case because I have never reported it. Perhaps I may do so, together with a number of others. It seems to me that if we could break down these prostate glands and promote the formation of eschar tissue, in patients of vigor and health, we could accomplish a great thing for them.

Dr. G. K. Smith remarked that considerable had been said about catheters, and it had been remarked that there were no perfect ones. He believed that there had been considerable improvement made within the past few years in this very useful instrument. The speaker had recently made an improvement in Jacques' catheter. One trouble with that catheter is that it will sometimes bend at the eye, and double on itself. To prevent that, he tunneled the end of the catheter by burning it with a heated wire, and then inserted into this opening the terminal extremity of a small elastic French bougie. This is passed into the eye of the catheter and pushed forward until it projects about an inch beyond the extremity of the catheter, and is then cut off just in front of the eye. This serves as an elastic guide to the catheter, while it prevents it from doubling on itself. He had found some cases where he could insert that instrument and no other. He had found also some cases in which that would not go. Here are several other points upon which he would like to speak had there been time. For instance, what is the occasion of this enlargement of the prostate? He thought Dr. Otis, of New York, had almost immortalized himself by showing that enlargement of the gland is, as far as his observation goes, always associated with stricture. Dr. Otis told me only a few days ago that *he had never seen an exception to this rule.* I believe that stricture is in many cases the cause of prostatic enlargement and consequent retention of urine. I do not believe that prostatic enlargement is the necessary result of old age; but that the increase in size is due to inflammation and the addition of new tissue to its substance. This inflammation may find its origin in gonorrhœa, which has extended along the canal to the prostate; or it may be the result of long-continued reflex irritation from stricture. If it be true that stricture is the cause of prostatic enlargement, then the operation which will restore the canal to its normal size should take the first rank in remedial measures.

DR. FRANCIS STUART: I would like to ask one question incidental to this paper. Three years ago I had occasion to look up the works upon surgery in order to answer this question—in what proportion of cases of elderly men is the prostate enlarged? In a work published by the Churchills under the head "Diseases of Old Age," the following statement is made: that the prostate is not enlarged in anything like the number of cases or as frequent as has been stated. As a student, and since I had received the impression that enlarged prostates in elderly men were the rule, not the exception, I would like to hear Dr. Gouley upon this point.

DR. GOULEY: It was the prevailing impression among surgeons, especially surgeons who were in active practice thirty-five or forty years ago, that in old men the rule was enlargement of the prostate; but more recent investigations, principally those of Dr. Messer, lead us to believe that the proportion is about 30% of men above the age of fifty-five. Out of these thirty, one in seven *suffers* in consequence of this enlargement of the prostate. I believe this to be an underestimate, for there are a great many elderly men who have enlarged prostates, who are able to empty the bladder spontaneously, but with difficulty, and the urine is often purulent. Those men have not chronic retention of urine—they empty the bladder completely. A few of them have incontinence of urine, true incontinence. Their bladder is not capable of containing any urine. It escapes through the urethro-vesical orifice as rapidly as it flows from the ureters. Those are cases of multiple tumors at the urethro-vesical orifice. I shrewdly suspect that there are more of these cases than we know of. Many of the old men in alms-houses who soil themselves with urine (called by the French gâteux) are cases of incontinence of urine from enlarged prostate. I believe, therefore, that more than one in seven of these thirty suffer more or less inconvenience in consequence of enlargement of the prostate. But there is another class; men who are not able to pass a drop of urine and have no general enlargement of the prostate. The trouble is entirely above the veru-montanum. In that portion of the prostate which contains more of the glandular element than other parts—that portion spoken of by Sir Everard Home as the third lobe, and by Mercier as the supra-montanal region. The man who has an enlargement of the prostate and is still able to urinate has equilateral hypertrophy. This does not produce stagnation of the urine. He is able to urinate, and never gets chronic retention; but he does get *acute* retention—as in Dr. Hutchison's patient. These patients should be trained in the use of the catheter, and should be instructed early, because they are liable to acute retention, after debauches or venereal excesses or from numerous other causes. Dr. Wight's ease was one of acute retention of urine. I do not wish to criticise but I think probably the long catheter would have been sufficient to relieve the patient. As a proof that he had acute retention, the man was able to urinate afterwards, which he would not have done had it been a case of supra-montanal hypertrophy.

THE DOCTOR then answered one or two points which had been raised. First, in relalation to catheterism in cases of great difficulty. Now what are cases of great difficulty? What are the cases in which catheterism is impossible? A man has had chronic retention for a long time. He has been in the habit of catheterizing himself, and for some reason unknown he cannot catheterize himself. The surgeon comes and also fails to draw off the urine. There is where much mischief is done. What does it mean? He has made a false route and that is the whole difficulty in catheterizing in these cases. The surgeon fails to enter, because the point of the instrument suddenly lodges in a cul-de-sac. But there is a remedy which scarcely ever fails in cases of false routes, and that is the invaginated catheter. In regard to the aspirator he said that if the question were examined carefully, it would be found that supra-pubic capillary puncture with aspiration is not to be used with impunity, and that it should be reserved for cases of acute retention, which happen away in the country where other appliances are not at hand. Catheterism in chronic retention must at last be resorted to, since aspiration cannot be repeated three or four times daily for an indefinite period; why not then begin with proper catheterism? The catheter properly used does not give rise to infiltration of urine, but capillary puncture with aspiration has caused this accident in more cases than we know of. Five or six years ago everybody was aspirating bladders and using aspiration in all kinds of cases. Less is heard of it now. It seems to have gone out of fashion, and those who still employ it, do so only in cases of great desperation. But its use should be resorted to with a little more forethought. It should not be used at random any more than catheterism should be done recklessly.

DR. SQUIBB advocated the use of the open-ended catheter, and gave a short history of its origin. It originated with Dr. Lynch, who found that it entered the lower part of the bladder with greater facility than the ordinary catheter. He also alluded to the fact that a great many people get chronic retention of the urine who do not get decomposed urine chemically—the urine will remain undecomposed for very many reasons. These cases very rarely reach the surgeon, because they simply amount to inconvenience. There is no cystitis—they simply disturb the rest. General Scott used to say that a large proportion of his compatriots, after they had reached sixty years of life, had to get up once in the night, and once in addition for each additional five years that they lived. And he was a pretty close observer.

DR. RISCH bore testimony to the value of the views of the essayist in regard to rigid instruments. As years roll along he uses rigid instruments less and less. He preferred the French flexible instrument. He also thought that in treating cases of enlargement great attention should be given to rectal irritation produced by irritation. He related a remarkable case which illustrated the importance of this doctrine. The use of borax solutions as a wash is important.

DR. GOULEY, in closing the debate, called attention to the fact that the subject of debate was chronic retention of urine, whereas the Society had been talking about the prostate. He had also fallen into that error. It is difficult to separate the two. The enlarged prostate is the principal but not the only cause of chronic retention, and the other causes have not been discussed. As to answering the various points raised, he could not do justice to them at the late hour; therefore he would not attempt it, and would only speak on the subject of catheters, because the catheter is the surgeon's mainstay, the only thing to be absolutely depended upon; and any man who contributes a good new catheter does much for the sufferers who have to use it. Dr. Squibb alluded to a catheter open at the extremity. It is a very excellent instrument, but the Doctor labors under a slight misapprehension as to the inventor of the instrument. The catheter open at the extremity was first suggested by Desault in the last century, and upon this is based a system of catheterism. The speaker had made some improvements in it. There is also a rubber catheter open at the end. In that portion of the paper not read he had given the history of vulcanized rubber catheters open at the end. It is now six or seven years since he had been working at the india-rubber catheter open at the end, and also those with a lateral eye. A perfect one has not yet been produced. They are not as good as silk catheters open at the end. The extremity is not rounded but sharp. The opening is made too small or too large. A great difficulty in the construction of catheters is in the eye. He had been trying for three or four years to get Tiemann to make the velvet eye a little longer and narrower than is usually seen, at the same time allowing the same volume of urine to pass through. He did not advocate the use of metallic catheters. He urged their discontinuance. The only exception to this rule is the invaginated catheter before referred to. Metallic catheters are prolific causes of false routes, and therefore causes of death.

THE MEDICAL SOCIETY OF THE COUNTY OF KINGS.

A REGULAR STATED MEETING of the Medical Society of the County of Kings was held on the evening of Tuesday, Dec. 20th, 1881, at 398 Fulton Street, Brooklyn, the President, Dr. C. Jewett, in the chair, Dr. R. M. Wyckoff, Secretary.

The meeting was called to order shortly after eight o'clock, about fifty-five members being present.

The Minutes of the November meeting were read and approved.

The following proposals for membership were made: By Dr. J. W. Hyde, Washington J. Brandt, M.D., 380 Union Street; and by the President, E. J. Chapin Minard, M.D., 85 Decatur Street.

THE COUNCIL reported acceptance to membership of Dr. D. C. Lewis, Univ. of Mich., 1881, and John Mears, Licentiate of the Medical Society of the County of Kings, 1878; Jacob Nehrbas, M.D., Col. P. & S., N. Y., 1880, and Henry McHatton, M.D., Bel. H. M. C., 1881.

The following amendments to the Constitution and By-Laws were offered:

On recommendation of Council:

To amend Ch. X., Sec. 1 of the Constitution. Instead of "The officers of the Society shall constitute the Council," read "The officers of the Society, with the ex-Presidents of the Society, shall constitute the Council."

By Dr. Reese:

That the annual assessment of the Society shall not exceed the actual and necessary expenses, as estimated for the current year.

By Dr. Hopkins:

That all members of this Society of less than three years' standing in the profession be liable for dues for current year at not more than $1.00 for each year they have been practicing their profession. If the dues are not paid within the current year, they become liable for the full assessment.

That portion of the report of the Committee on the Continuance of the Publication of the PROCEEDINGS which relate to the dues and assessments, was, on motion, offered as an amendment to the Constitution.

The paper of the evening was read by Prof. J. W. S. Gouley, of New York, and debated by Drs. Jos. C. Hutchison, Jarvis S. Wight, E. R. Squibb, Francis H. Stuart, Geo. K. Smith, Prof. Gouley and others. It was entitled "Chronic Retention of Urine in Elderly Men."

At the conclusion of the debate the thanks of the Society were tendered to Dr. Gouley for his valuable contribution, with the hope that he would take an early opportunity to present the second part of his paper.

Dr. E. R. Squibb, Chairman, presented and read the report of the Special Committee on the Continuance of the Publication of the PROCEEDINGS.

Dr. GRAY: Mr. Chairman—The Medico-Legal Committee have met a Committee appointed from the Bar of this county, and have endeavored to arrange some plan upon which a meeting of the medical and legal profession could be held jointly. They find great difficulty in uniting upon any plan that would be entirely satisfactory to both professions. Our desires were, of course, to have them associated in the Kings County Medical Society in order that whatever glory would accrue from such an union might come to us. At once we were met with the obstacle that lawyers could not belong to the Kings Co. Society, and, of necessity, could not act as officers; and unless that difficulty could be overcome they were unwilling to come. Finally Dr. Squibb suggested that we could have some such arrangement as the following. It would be beating the devil around the stump, to be sure, but it might effect our purpose. We could call a special meeting of the Society, and that special meeting might resolve itself into a committee of the whole. This committee of the whole elects its own officers, then the meetings can be continuously adjourned meetings of this committee of the whole; so that in that way we can bring lawyers into the Society. But the lawyers would not consent to that arrangement either, so that the upshot of the whole thing is that either we can occasionally have a special meeting of the Society for medico-legal purposes, to which the lawyers shall be invited, or else there must be a separate society to be known as the Medico-Legal Society of Brooklyn, or by a similar name, in which lawyers and medical men shall stand upon an equal footing. Now, it was proposed that there should be such a society formed. A provisional organization has even been effected; and your committee reports this fact here to-night and awaits instructions as to what they shall do concerning that project. Of course the committee will not undertake to go into it except with the consent of the Society. We shall desire an expression of opinion on the part of the Society, and instructions as to what we shall do.

DR. WALKER moved that the whole matter lay over for one month, so that the gentlemen may have proper time to consider it, and it may then be brought before the Society with a prospect of an intelligent consideration.

DR. GRAY: I prefer that course—or even to lay it over again if there is not time at the January meeting to discuss it properly. It is a matter of great importance.

The motion was carried, and so the matter went over to the January meeting. The Chair then announced the order to be nomination of officers for 1882.

DR. REESE moved that, in order to confirm strictly with the by-laws, two or more persons be nominated for every office. Motion seconded.

The following nominations were then made: (*See ballot on page* 327.)

THE CHAIR announced that there were no vacancies in the State Medical Society delegation. But as all officers elected at the next meeting must be nominated at this meeting, some provision should be made for delegates to the American Medical Association. The rule has been for the Council to make up a ticket which is to be cast by the President.

DR. SQUIBB moved that the question of the delegation to the American Medical Association be referred to the Council, with directions to present a ticket at the next meeting of the Society. The resolution was seconded, and it was so ordered.

After some discussion it was agreed that so much of the report of Dr. Squibb's Committee as referred to assessments and dues be offered as amendments to the by-laws, and printed on slips, together with all other amendments offered at this meeting, to be forwarded to members, as has been the Secretary's custom.

THE CHAIR announced that the obituary notice in relation to the death of Dr. Carpenter was in order.

THE CHAIRMAN of the Committee said they were not ready.

DR. SEGUR moved that the matter presented by Dr. Walker to the Society at the October meeting, and laid over, relative to a petition to the Park Commissioners regarding certain Coney Island lands, be taken from the table. The resolution was seconded, and carried. Thereupon

DR. WALKER moved the appointment of a committee of three, to whom that petition be referred. (See October minutes.)

The motion was seconded and carried; and the Chair appointed as such committee Drs. Burge, Thayer and Walker.

THE CHAIR declared the following members of the Society: Anna A. Forrest, M.D., James McMannus, M.D., and Jesse B. Low, M.D.

THE SECRETARY presented the following resolution:

Whereas the journal, known as the *Index Medicus*, has proved itself to be a work o the highest value to the general profession of medicine, and

Whereas, Its discontinuance, which is impending by reason of deficient support by subscription, would be felt as a loss especially by the scholarly part of medical labor, therefore be it

Resolved, That it is respectfully suggested to the State Medical Society that that Society devote annually the sum of fifty dollars as its contribution to the maintenance of the *Index Medicus*.

The motion was duly seconded and adopted.

THE SECRETARY also asked that the October minutes of the Society, which are quite long, and had not been read, be accepted as printed in the PROCEEDINGS. It was so ordered; and the Society adjourned.

REPORT.

At the November meeting of this Society a Committee was appointed upon the following precept:

The Council being of the opinion that THE PROCEEDINGS must be paid for hereafter from some other revenue than that derived from advertisements, recommend that the Society instruct the President to appoint a Committee of five—not members of the Council—who shall consider this matter and report thereon to the Society not later than the December meeting.

The Committee appointed under this motion now begs leave to report at this December meeting as directed.

On investigation, the Committee finds that, during its entire career for the past six years, THE PROCEEDINGS has been supported financially by the proceeds of advertisements upon the advertising pages and cover; and the great amount of labor required to procure these advertisements and to edit and issue the Journal of the Society has been voluntarily contributed, without any emolument, or even reimbursement of small outlays, by the Publishing Committee of the Council; and further, that the Journal has been issued and kept up with entire impersonality and punctuality from the very first to the present time. The result of this great expenditure of time and labor by two members of the Society has been—first, a journal of its proceedings, whereby its papers have been put upon permanent record, and this record sent to every member of the Society every month, so that all those who could not attend the meetings were still supplied with all the material of every meeting, in a form well adapted to review, preservation and subsequent reference. Secondly, as soon as the Journal established its character, it was admitted to the exchange lists of almost all the medical journals of this country, and many of the most desirable ones from abroad. These exchanges at once established a reading-room for the Society in connection with its Library, giving the members free access to much of the current medical literature of the entire profession; and there are now about 120 medical periodicals on the shelves of this reading-room, all due to this Journal and which, if there by subscription, would cost the Society some $400 a year. How much this current literature, made possible only by THE PROCEEDINGS, or by subscription, adds to the value and utility of the Society's Library, each member can judge. Thirdly, these accumulated exchange journals have been preserved and bound mainly at the cost of THE PROCEEDINGS, and now the bound series of these journals in the Society's Library have a saleable value of perhaps not less than $500.

These very definite results of the publication of this Journal have, up to the present moment, not cost the Society one cent of expense. In 1879, the sum of $150 was appropriated to the aid of the Journal by the Society; and in 1881, the Society set apart $1.50 of each member's annual dues to pay for the Journal which each member received. As there are about 320 active members who pay their annual dues, this appropriation amounted to not less than $480, making, with the appropriation of 1879, not less than $630. But as the treasury of the Society during these years was at no time able to pay these appropriations, they never were paid, and the canvassing for advertisements had to be continued with increased expenditure of time and labor, and the Journal was supported without the appropriations of the Society. Voluntary subscriptions from a few members and a few subscriptions from persons not members, have aided in supporting the Journal and it has now on hand sufficient to meet the expenses of the numbers up to and including the February number.

Thus it may be fairly stated, that from 800 to 1,000 copies of THE PROCEEDINGS have been published and distributed every month, and each member of this Society has received a copy each month throughout the entire six years without one cent of expense to the Society or to its members, directly or indirectly.

But the time has now arrived when this cannot be continued, because, first, the two members upon whom the labor has fallen, can no longer afford the time, labor and expense of canvassing for advertisements, as these are now obtained and kept up with increasing difficulty. Secondly, because some of the advertisements—and generally those which are most profitable—are objectionable when associated with the pages of a medical journal. Hence this Committee is raised to report upon a plan whereby the Journal can be supported without advertisements.

But manifestly, there is a grave question which precedes this one of supporting the

Journal—a question which the Society alone can answer—and that is—Does the Society want to continue the Journal at all, when the fact becomes plain that if it wants the Journal it must pay for it, not only this year, but as long as it wants to continue it hereafter? And, in deciding this point, the Society must remember that when the Journal ceases the exchanges will also cease, and with them the reading-room also fails, so far as current literature is concerned. The Society should also remember that it can easily support the Journal and pay for it any number of years in the future by annual dues of $6 promptly paid.

To keep up the Journal without advertisements, except those on the cover, which are not objectionable, and will come spontaneously, will cost about $800 a year, or possibly $900.

By a careful yet liberal estimate, your Committee finds that the Society's expenses for 1882, with all its present conveniences, will not probably exceed $1,150. With 330 paying members, and the annual dues at $5, the income of the Society should be $1,650, or $500 more than the estimated expenses. Or, with the annual dues at $6, and paid without loss for collector's fees, the surplus would be about $830, or just about enough to support the Journal.

But your Committee finds that with the annual dues at $5.00 (and it was about the same when the annual dues were $3.00) that, although the payments were due from every member in January, 1881, in December 96 members, or nearly 30 per cent. of the whole number, had failed to pay their dues, although called on more than once, and that a large majority of those who have paid have done so through a collector, at a cost to the Society of 60 cents on each member's dues, so that in fact an assessment of $5.00 annual dues only yields the Society about $4.40 on all those received through a collector, and on an annual dues of $6.00 would yield only about $5.28. But this is not the only difficulty. The rent of rooms, and all the other current expenses of the Society, have to be paid quarterly, or oftener, as they accrue, and if the support of the Journal should be undertaken by the Society, the bills for printing, mailing, etc., would have to be met promptly every month, as they have been in the past. Under the present condition of the treasury, even with as careful and active a treasurer as at present, this would be impossible, for it is just as much as he and his collector can do to keep the Society out of debt without the Journal, although members are notified every year that their payments are due in advance, because they are to pay for the current expenses of running the Society throughout the year. If the members continue to be so backward in their payments, and especially if the support of the PROCEEDINGS be assumed by the Society, it will be absolutely necessary to do something for the relief of the treasury, and it seems but barely just to the Society that those members who make a collector necessary should bear the expense by paying the annual dues with the 60 cents cost of collection added. Then only will the Society realize the amount which it has a right to expect, and upon which its own expenditures are adjusted. Such a rule as this would reduce the estimated expenditures for 1882 by more than $100 of collector's fees, and would leave a surplus of $600 instead of $500. Then if this surplus of $600 in 1882, with say $30 added, was given by the Society to the Journal, it would pay the debt of the Society incurred by the appropriations of $150 in 1879, and $480 in 1881, which are due to the Journal but not paid. This sum of $630 would carry the Journal through the remainder of the year 1882—the funds being already in hand for the January and February numbers. This would be simply the Society paying its back debt to the Journal, and that without increasing the annual dues for 1882 beyond $5.00.

After careful and mature consideration of the whole subject, your Committee judges that the Journal and reading-room are very important elements in the future progress and advancement of this Society, and of the profession in this county, and earnestly recommends that they be continued and liberally supported.

Your Committee further recommends that for the year 1882 they may be supported simply by the Society paying its back debts to the Journal. And to carry out this recommendation, the Committee submits the following resolutions to be passed at the Annual Meeting in January next:

Resolved, That the Treasurer be directed to pay to the Publishing Committee of the PROCEEDINGS, out of the first available funds that may come into his hands, the sum of six hundred and thirty dollars, this being about the amount appropriated at previous Annual Meetings.

Then, in order to put it in the power of the Treasurer to respond to the above resolution in the future as he has been unable to do in the past, when the appropriations were made but could not be paid, your Committee recommends the passage of the following preamble and resolutions:

Whereas, A large proportion of the members cause great inconvenience and expense to the Society by paying their annual dues too late to meet promptly the current expenses of the Society as they accrue, and paying them only to a collector, thus costing the Society 60 cents on each annual due of $5.00, and yielding to the Society $4.40 instead of $5.00; and

Whereas, The usual notices to the members for the past two years, to the effect that their payments are due at the first of the year, to meet current expenses as they arise, have had no effect in remedying the evils of delay and expense, therefore

Resolved, That the annual dues to the Society for 1882, from those members who voluntarily pay the money into the hands of the Treasurer within the first quarter of the year, or before May 1st, shall be $5.00. From those members who voluntarily pay the money into the hands of the Treasurer after May 1st, and before October 1st, the annual dues shall be $5.25. After October 1st, the unpaid annual dues shall be placed in the hands of a collector, and shall then be $5.60, and shall continue to be $5.60 during the year. But if not paid within the year they shall be $5.75 until paid, or until the members be dropped for non-payment, according to the by-laws and rules already in operation.

Resolved, That the Treasurer have this preamble and resolutions printed upon the bills for annual dues issued to each member.

Whether the above resolutions be adopted or not, or whether the Journal be assumed by the Society or not, your Committee would suggest, for the relief of the Treasurer, that members should come to the Annual Meeting, and those which succeed it, with their annual dues and their professional cards enclosed together in an envelope addressed to the Treasurer. By simply handing these envelopes to the Treasurer at the meetings he would not be hurried to make out receipted bills at the moment; the member's time would not be taken up in waiting for this, and the meetings would not be disturbed by the Treasurer's processes. But he would have each member's correct name and address with his money, and could send the receipted bill by mail, at his convenience, within the next day or two. Some such plan your Committee believes to be greatly needed.

In conclusion, your Committee hopes for a very full attendance at the Annual Meeting, as well as at this one, upon this very important subject, and that every member will maturely consider the subject in all its bearings, and go to the Annual Meeting, whereat there will be no time for discussion, fully prepared to vote one way or the other upon the above resolutions.

It is suggested that this report be accepted and discussed at this December meeting, and that the question upon its adoption be postponed until the Annual Meeting in January. This will give each member time to go into the matter as far as he may desire, in order to decide how to vote.

Then if a majority present at the Annual Meeting adopt the report, that adoption will carry with it and include the adoption of the recommendations and the resolutions of the report, and will make these the order and ruling of the Society.

That each member may have all possible facility for making up his judgment, it is suggested that this report be printed in full in the December number of the PROCEEDINGS, with the usual notes of the discussion that may occur upon it.

All of which is respectfully submitted by your Committee.

J. H. HOBART BURGE, M.D.,
J. C. HUTCHISON, M.D.,
C. L. MITCHELL, M.D.,
ALEX. J. C. SKENE, M.D.,
E. R. SQUIBB, M.D., *Chairman.*

'Ασκληπιὸς

ʽο Σωτὴρ

Χαρμα μέγ' ανθρωποισι, κακων θελκτῆρ' οδυναων.

Hymns of Homer, No. XVI.

PROLIFERATIONS.

——DR. WM. M. THALLON, of this city (now in Vienna), has placed the Society under obligation to him by executing a commission for it in forwarding from London the missing volumes of the *Lancet*, which it was found impossible to purchase in this country. The Society is now in possession of a complete file of the *Lancet* from its origin in 1821.

——THE INOCULATIONS OF PASTEUR for splenic fever, are reported, up to October 1, on 160 flocks, containing 68,900 sheep. Before vaccination was practiced, the mortality from the fever was about one in twenty-three. During vaccination, and before its effects were fully obtained, about one in 130 died. After the operation had produced its full effects, there died only about one in 7,000 of those vaccinated.

——Dr. Foulis, of Glasgow, is dead from diphtheria. He was known for his skillful and original work in laryngeal surgery. He had occasion to tracheotomize two cases of virulent diphtheria; from them he is believed to have contracted the disease, and in a few days was dead.

——The South Bushwick Orphan Asylum now occupies a new structure on Melrose Street, near Hamburg Avenue, being a branch of the Graham Avenue R. C. Asylum. It has over seventy orphans under its care.

——Gangrenous Varicella and Vaccinia. Mr. Jonathan Hutchinson has described recently a form of chicken-pox that takes on gangrene, is accompanied by suppurative iritis, and in some cases has proved fatal. He regards the disease called "burnt holes" in Ireland, also "the eating hive," as this gangrenous type of varicella. It usually occurs in healthy children. Mr. H. argues that vaccinia also has its gangrenous type, even in healthy infants, and he gives the history of a case—it died on the twenty-first day—which he believes belonged to that type. Mr. W. Stokes, of Dublin, has also described a similar case, in which for a time the danger was great, but eventually it recovered.

——A Good Location for Practice, until recently occupied by a member of this Society, is now vacant. Address the Editor for information.

——The Need of a Contagious Disease Hospital in Brooklyn has long existed. The time has fully come that an earnest attempt be made for the establishment of such an institution. It is proposed to have the entire medical profession of this city bring the full weight of their influence upon the Board of Supervisors and the city officials to inaugurate this work without further delay. The accommodations at the County Hospital are notoriously inadequate, and it is very little less than a scandal that a city of 600,000 inhabitants makes no provision within its own limits and jurisdiction, for the care of infectious disease. All physicians under whose eye this paragraph may fall, and whose interest in the matter will lead them to take an active part in the agitation of the question, are desired to send their names in to the Editor. Any physicians knowing of instances or arguments tending to strengthen the proposition, are invited to assist by furnishing such in writing.

MEDICAL SOCIETY OF KINGS COUNTY.

61st Annual Meeting, January 17th, 1882.

LIST OF NOMINATIONS FOR OFFICERS AND DELEGATES.

By-Laws, Chap. I., Art. 5.—Nominations for Officers and Delegates shall be made at the December meeting. The Secretary shall have the names of all nominees printed on slips of paper, two of which shall be sent to each active member.

☞ In voting use the slip as a BALLOT, after having drawn a line through the names of those nominees for whom you do NOT wish to vote.

FOR PRESIDENT.*

Dr. C. JEWETT.

FOR VICE-PRESIDENT.

Dr. G. W. BAKER,
Dr. G. G. HOPKINS,
Dr. W. WALLACE.

FOR SECRETARY.

Dr W. W. REESE,
Dr. R. M. WYCKOFF.

FOR ASSISTANT SECRETARY.

Dr. P. H. KRETZSCHMAR,
Dr. J. B. MATTISON,
Dr. H. W. RAND,
Dr. W. G. RUSSELL.

FOR TREASURER.†

Dr. J. R. VANDERVEER,
Dr. J. WATT.

FOR LIBRARIAN.

Dr. T. R. FRENCH,
Dr. J. WALKER.

FOR CENSORS [five in number].‡

Dr. G. A. EVANS,
" L. C. GRAY,
" A. HUTCHINS,
" J. A. JENKINS,
Dr. A. R. MATHESON,
" J. B. MATTISON,
" Dr. A. R. PAINE,
" H. N. REED,
Dr. J. D. RUSHMORE,
" B. A. SEGUR,
" R. L. VAN KLEEK,
" B. F. WESTBROOK.

The President requests the following members to act as Tellers:

Dr. COLTON,
" WILLIAMS,
Dr. RAYMOND,
" PAINE,
" De La VERGNE,
Dr. EMERY,
" PALMER.

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* Drs. A. Mathewson and F. W. Rockwell have, in writing, requested to have their names withdrawn from this position.

† Dr. F. H. Colton has withdrawn his name from this position.

‡ Drs. J. S. Andrews and W. G. Russell have withdrawn their names from this position.

——THE REGULAR MONTHLY MEETINGS of the Medical Society of the County of Kings are held at 8 P. M. on the third Tuesday of each month, at Everett Hall, 398 Fulton Street.

The December meeting will be held on the 17th. The papers will be announced on the card.

Election of officers for 1882, Reports of Committees, etc.

MEDICAL SOCIETY OF THE COUNTY OF KINGS.

OFFICERS AND COMMITTEES FOR 1881.

President	C. JEWETT, M.D., 307 Gates Ave.
Vice-President	F. W. ROCKWELL, M D., 6 Lafayette Ave.
Secretary	R. M. WYCKOFF, M.D., 532 Clinton Ave.
Assistant-Secretary	J. H. HUNT, M.D., 419 Hart St.
Treasurer	J. R. VANDERVEER, M.D., 301 Carlton Ave.
Librarian	T. R. FRENCH, M.D., 469 Clinton Ave.

CENSORS.

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Chap. XI., Art. 2, of By-laws: "Any Member elected as Delegate to the Medical Society of the State of New York, who shall be unable to act as Delegate during two successive years, shall be considered to have vacated his position as Delegate.

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PROCEEDINGS

OF THE

MEDICAL SOCIETY OF THE COUNTY OF KINGS.

VOL. VI. FEBRUARY, 1882. No. 12.

GRINDELIA ROBUSTA.

REPORT FROM THE COMMITTEE ON THERAPEUTICS OF THE MEDICAL SOCIETY OF THE COUNTY OF KINGS, BROOKLYN, N. Y.

The paper entitled "Grindelia Robusta as a Remedy in Asthma," read by T. M. Rochester, M.D., before this Society at its May meeting, 1881, was referred to the Therapeutic Committee for further consideration. By order of the President, we beg leave to submit the following:

Much has been written within the last few years in favor of Grindelia Robusta. Many extravagant statements have appeared from time to time in the journals. But in judging of the value of any new therapeutic agent from its literature, it is well to bear in mind the tendency of the profession to report only successful cases; the failures rarely appear in print. Enterprising firms engaged in the manufacture of drugs, send forth their circulars with glowing accounts of the remarkable and almost specific action of certain preparations, and, somewhat to the doubting mind of the profession, a few unsuccessful cases are submitted to give semblance of fairness to the reports. This may be well enough on "business principles," but it does not conduce to sound therapeutic principles, nor give a groundwork upon which can be based right conclusions.

The investigations now being made in the line of new remedies is commendable, for no doubt many remedial agents exist in nature which are akin in their action to many now in use; but we should be careful how we reject old and well-established remedies for new ones of their class, unless it be plainly proven, by a study of their physiological action or therapeutic effect, that they possess greater medicinal virtues.

REPORT OF AVERY SEGUR, M.D., MEMBER OF THE COMMITTEE.

During April and May last, at St. Peter's Hospital, I used a fluid extract of Grindelia Robusta, prepared by a member of the Committee, Dr. E. R. Squibb, for the purpose of their observation. Carefully selected Grindelia Robusta was used, so that for the certainty of the efficiency of the preparation used, as well as for the gratuitous supply, acknowledgment is due to Dr. Squibb.

It is not satisfactory to report so few observations, but they show sufficiently, perhaps, the value of the large claims made for the medicine.

1st. No purely spasmodic asthma was treated.

2d. One old asthmatic woman, who had marked emphysema, took 15m. of the medicine every two hours for a fortnight. It did not disturb the stomach, and a gradual and decided relief in the number and severity of the paroxysms was observed

3d. A man with chronic bronchitis, for four months, and severe paroxysms of asthma, who had taken, without relief, iodide of potassium and anodyne expectorants, and inhaled the fumes of nitre paper, was promptly and permanently benefited by the Grindelia, 15m. every three hours.

4th. During the two months every case of bronchitis, acute or chronic, or in phthisical patients, were given the Grindelia, usually 15m. every two hours.

Expectoration, cough, and respiration were usually favorably modified, but not in a degree markedly different from the effects of various other treatments.

Frequently the medicine would, after a few days, produce headache, and would have to be suspended. It was usually well borne by the stomach.

5th. In two cases of asthma, in private practice, I have used Grindelia. In one with marked benefit; in one with none at all.

The first was a female, who had been for years subject to attacks of acute bronchitis, with asthma. Formerly I treated her with iodide of potassium, tonics, and cod-liver oil. In two attacks the Grindelia, only 15m. every two hours, has relieved cough, expectoration, and asthma much more satisfactorily than the former treatment.

Finally, in all cases the medicine has been used without combination, that there might be no uncertainty as to the effects due to it.

REPORT OF CASES BY CHAS. E. DE LA VERGNE, M.D.

Mrs. J. C., æt 23, native of Ireland. Has had asthma for two years. Constant dyspnœa and cough, increased on exertion and at night. Examination of lungs showed only sonorous and sibilant rales over chest. No empyæma could be diagnosed. Patient treated for three weeks with potass. iodide, in large doses (as much as forty grains daily), and antispasmodics, with no improvement in either cough or dyspnœa.

Patient was then placed upon fl. ext. Grindelia Robusta, min. xxx., four times a day, and in two days there was marked improvement.

This improvement has continued for three months, and the patient is perfectly comfortable while taking the medicine. The lungs still show rales, but not nearly so marked as before.

Two other cases (treated at the dispensary) with constant, slight dyspnœa, worse on exertion, the chest showing sibilant and mucous rales, were benefited by 30 min. doses of Grindelia, four times a day, and have not returned since.

Three cases (dispensary) of asthma of a spasmodic nature, only occurring at times, with no dyspnœa between the paroxysms, were treated in the same manner for three weeks, with no improvement, either in diminishing the frequency or severity of the attacks. Physical examinations of chest gave negative results in all these cases.

Mrs. P., æt. 35, U. S., has suffered for some years with attacks of spasmodic asthma, occurring more or less frequently while in Brooklyn, and is perfectly free from them when residing inland as far as the centre of the State. No treatment has done more than to palliate, except the iodide of potassium, in such doses as to produce acute and gastric disturbance. Physical examination of lungs negative. Half-dram doses of fluid extract of Grindelia failed entirely to relieve.

One case of cardiac asthma, with aortic stenosis, was not affected by the same treatment.

REPORT OF CASES BY WM. M. THALLON, M.D., AT BROOKLYN CITY HOSPITAL.

Gus. Stonehouse, æt. 58, Scotland; married, newsdealer. Admitted May 17th, 1881; discharged June 20, 1881.

Eight months previous to admission had begun to be troubled with shortness of breath and smothering. Had lived in Brooklyn several years previously and could not account for sickness in any way. Was not much troubled with coughing except during paroxysms. These paroxysms occurred at regular intervals about 2 or 4 A. M., or after any sudden exertion. Had been on many different kinds of treatment, the last previous to admission being urine and molasses.

At first I put him on tincture stramonii, and faithfully tried this, without success. At the same time got his alimentary canal into good working order. Next tried belladonna and lobelia inflata. Then tried cigarettes of potass. nitras., with some benefit.

The respiration at this time was the usual wheezy, asthmatic one, with a few mucous rales, most marked on the left side. The left pupil was smaller than the right.

At this stage he was put on Grindelia (Squibbs' fl. ext.). At first I used the formula of Dr. Rochester, but soon discarded it. Gave the Grindelia alone or mixed with equal parts of glycerine.

At first ʒss. of Grindelia was given g. 4 h. between paroxysms, and every fifteen minutes during them. After a little the frequency was increased between the paroxysms to every three and then every two hours.

The improvement was at once marked and rapid. No other medicine was used. Patient seemed to cough up more freely, and the sputa were less tenacious and thick. I did not notice much decrease (though there was a little) between the difference of the pupils.

Before he was discharged the breathing had lost its wheezy character, and the rales were gone. The patient could run up and down stairs, and take long walks, without discomfort. He still woke up at 2 A. M., from long habit (of his trade), but the paroxysm was practically gone, or one dose was enough to banish it. He said he would return if again troubled. Has not since been heard from. A recovery.

Case 2d.—Bronchitic Asthma. James Conly, 30 St. Johns. Laborer. Admitted August 9, 1881. Discharged September 1, 1881. Visiting physician, Dr. Paine.

Patient a fisherman and dock-hand by trade. He gave a history of obstinate cough, lasting over two years, which had got much worse during last two months, reducing him so much in strength and weight that he could no longer work. He complained that his cough was much the worst about 6 A. M., and that even more distressing was the smothering. During a coughing spell, which came frequently, he became absolutely black in the face. On auscultation, found heart normal, whole chest full of moist rales, both in large and small bronchi. There was no history or signs of phthisis. He had been under a great variety of doctors without benefit—mostly gone through pharmacopia. He was put on Ext. Grindelia Rob. Fl. (Squibb's); Glycerine *aa* ℥ii, ♍Sig. ʒi; g. 4. h. Afterwards, g. 2. h. and at 6 A. M. ʒi. g. 15 minutes.

The improvement was almost instantaneous. The cough became much easier, and soon diminished in quantity. The sense of smothering departed. The rales first left the lesser, and gradually the larger, bronchi. Patient rapidly regained strength and weight, and departed quite recovered, and exuberantly grateful, with the above prescription in his pocket. The only thing that had done him any good. Grindelia was the only drug used.

REPORT OF THREE CASES OF SPASMODIC ASTHMA, BY J. A. MCCORKLE, M.D., MEMBER OF COMMITTEE.

CASE 1ST.—Miss W—, age 24. Nativity, United States. Occupation, hair-dresser.

HISTORY.—General health good; mother suffers from nervousness; aunt, on maternal side, had asthma; patient has had repeated attacks of spasmodic asthma for ten years; attacks are frequent and very severe, occurring with greatest intensity during fall and winter; for some years was obliged to leave the city and reside in the South, where she was entirely free from the disease; has been under observation for past eight years; various remedies have been tried during that time with variable results, but the most successful treatment has been moderate doses of potassium iodide, and small doses of arsenic.

In September, 1881, an attack occurring, she was induced to try the Grindelia Robusta. She reported relief from the remedy, but complained of nausea while taking the drug. In subsequent attacks she obtained no relief from the agent, and, of her own accord, resorted to the potassium iodide, with marked relief.

CASE 2D.—Mr. B—, aged 44. Nativity, United States.

HISTORY IN BRIEF.—Has had spasmodic asthma for twelve years, resulting in well-marked changes in chest wall and emphysema; general health good; asthmatic attacks are influenced by the state of the atmosphere—an east wind being a sure precursor of an attack, unless warded off by medicine.

Was called to attend him four years ago. After trying the usual remedies in various combinations, I found potassium iodide, in 10 to 15-grain doses, the most effectual treatment.

I gave him a saturated solution of potassium iodide, and directed him to take the equivalent of 15 grains at the outset of an attack, and repeat every 3 or 4 hours until relieved. He followed my directions implicitly, and for three years I did not see him, as during that period he suffered but little from asthma.

In November, 1881, was called, and found him suffering extreme agony, and begging for relief. The attack came on in the night, with such severity that the nearest physician was called, who at once prescribed Grindelia Robusta every hour. He took the medicine, without the slightest benefit. I saw him at 1 P. M. following day, and finding the Grindelia Robusta ineffective, advised him to resume the iodide treatment, which he did, with the effect of producing marked abatement of the distressing symptoms before evening—a good night's rest, and enabling him to resume his work the following day.

Case 3d.—Mr. H——, aged 30. Nativity, Germany. Occupation, lawyer.

History.—General health excellent, regular habits, with the exception of being an inveterate smoker. Has suffered from attacks of spasmodic asthma for three years. Heretofore has derived great benefit from the use of potassium iodide during the spasm.

Had an attack in October, 1881. Was induced to try the Grindelia Robusta in the usual doses, and after giving it a trial of 36 hours he gave it up in disgust, and I fear with a feeling that I was trifling with his suffering.

From my observation of Grindelia Robusta I am led to the belief that in pure spasmodic asthma it is of little value. In the catarrhal forms we might expect better results, on account of the oleo-resin it contains, and its demulcent properties. In my judgment the drug has no special medicinal virtue to recommend it above many other and better known remedies of its class.

Its action is that of a nauseating and stimulating expectorant. Its high price and nauseous taste are against it, when compared with other less expensive and more palatable drugs.

Certain cases of asthma are undoubtedly relieved by its use; also many by that very depressing agent, Lobelia, while the great majority will yield kindly, and somewhat permanently to the action of potassium iodide and arsenic.

A careful diagnosis of the cause upon which the asthma depends—whether cardiac, renal, or nervous—and a judicious selection of remedies for its treatment will, in many cases, direct the attention of the careful therapeutist to other agents in preference to the Grindelia Robusta.

REPORT OF ALEX. HUTCHINS, M.D., MEMBER OF COMMITTEE.

Acting under the instructions of the committee I put the tinct. Grindelia Robusta to the test in a great variety of dyspnœa, running over a period of six months, in private and hospital practice. So far as my observations go, it does not justify the claims made for it as an effective and trustworthy agent in asthma or asthmatic complications.

My experience with Grindelia Robusta in uncomplicated spasmodic asthma is limited to one case, and in that it failed utterly in giving even temporary relief. The case was aggravated but typical. In this, as in all the use of this drug, it was given uncombined with any expectorant or solution, so as not to obscure whatever effect it might be expected to produce. It was given in large and small doses, rapidly and at long intervals, during the height of the paroxysm and during the periods of moderate dyspnœa continued for many weeks. The treatment was a complete failure, though continued, for a test, even to the extent of trifling with the patient's suffering.

The Grindelia Robusta was used in a number of cases of dyspnœa dependent upon a variety of causes.

In suffocative bronchial catarrh, in some forms of humoral asthma, in chronic bronchitis of old age, and in sub-acute bronchitis, associated with a free secretion of tenacious mucus, the Grindelia Robusta exercised the function of a mild stimulant expectorant, very much inferior to the standard drugs of that class.

Further experiments have led me to the conclusion that in combination with allied drugs it does not materially assist, and certainly does not intensify their action.

An old gentleman, who has attended to his out-of-doors duties for many years, a martyr to a persistent but mild form of asthma, and who has for years gone to sleep regularly in an atmosphere of saltpetre fumes, found no relief from the use of Grindelia Robusta, alone or combined.

The potassium iodide, the nitrite of amyl, and the vegetable narcotics, which are the trustworthy remedies in spasmodic asthma, find no therapeutic counterpart in Grindelia Robusta.

It does not, and, apparently, cannot, initiate the reaction which is the needful preliminary to the relief of the paroxysm, and it possesses no anodyne properties to subdue and quiet the nervous exaltation. The history of asthmatic attacks is as varied as the individual cases.

The idiosyncrasy of the attack settles the character and duration of the spasm. When the force of the paroxysm has expended itself, the tendency is to recovery, and a great variety of drugs have gained credit for efficiency in the relief of asthma, when, in truth, many of them but assist the already developed secretion which is the result of the subsidence of the bronchial spasm, which would oftentimes go on to permanent relief, independent of the administration of drugs.

Asthma as a neurosis, and dyspnœa dependent upon some organic or accidental disorder, demand very different lines of treatment.

Judging from my own observation, the Grindelia Robusta has no influence in allaying the neurotic excitement, is not an anodyne to effect the secondary results of organic dyspnœa and is an inefficient dependent when a stimulant expectorant is indicated.

REPORT OF DR. W. H. THAYER, MEMBER OF COMMITTEE.

I have no report to make to the Chairman of the Committee on Therapeutics upon the subject of *Grindelia Robusta*, because I have no personal experience with it. When this subject was submitted to the Committee by its Chairman, with a request that the members should experiment with the new preparation, I was prepared to give it a trial whenever an opportunity presented; but before I had any occasion, the reports from others were so discouraging, both as to the efficacy of the medicine and its nauseous character, that I hesitated to subject my patients to its doubtful effects, especially as the treatment which had been usually followed in these cases produced sufficiently good results. Dr. Rochester's experience did not afford much encouragement to try it, because he had employed it in combination with other active drugs, so that it would be impossible to ascertain what share Grindelia Robusta had in the result. And I have never learned that when used alone it has satisfied the expectations that were raised.

I wish to take advantage of this opportunity to inquire into the origin of these expectations—for which, as in many similar cases, the medical profession are hardly responsible. A little consideration on our part will satisfy all of us, I think, that we are in danger of becoming the agents of manufacturing druggists, who flood the country with a great variety of preparations beyond what are demanded by our profession. We are somewhat responsible for encouraging the introduction of numerous combinations and preparations, of whose effects we have very inexact knowledge, which do not make good the places of well-established officinal preparations.

Take the preparation known as "Beef, Wine, and Iron," for example, whose name is delusive, as regards any remarkable properties it possesses as a substitute for any one of half a dozen officinal preparations of iron of well defined effects. The employment of preparations of this class is destructive of nice discrimination in the materia medica, and is apt to reduce us toward the level of mere dispensers of nostrums.

Our armory of materia medica is very full, but has room for unlimited additions in medicines of equal value with those already employed; but it is useless to add anything that is at all inferior or doubtful.

Every year brings us acquisitions such as the bromides, salicylic acid, chloral-hydrate, pilocarpin, iodoform, and nitrite of amyl, but it is worthy of notice that these remedies have come into use very slowly—their employment has increased only as they gained confidence by their proved merits; there has been no forcing; they have been produced only in response to professional demand.

It is generally allowed at the present time that we have no specifics, that medicines are merely adjuvants of physiological processes, and such a philosophy of therapeutics ought to caution us against great expectations from new remedies. In most instances we may, with greater profit, continue to employ the materials of long-known value, and become better acquainted with their effects.

CASE OF DYSENTERY.

BY. J. A. McCORKLE, M.D.

REPORTED BY F. J. MORTON, RESIDENT PHYSICIAN AT LONG ISLAND COLLEGE HOSPITAL.

Zacharius Christiansen, aged twenty-seven, came to hospital Sept. 27th. He is a strong-built man, rather above the average size; general condition good.

Had a diarrhea about two weeks ago; after that bowels were constipated. Last night diarrhea set in again. Stools watery, with blood and mucus; pulse this evening 96; temp., 102¾; saline mixture ordered. The next morning patient reported twenty passages during night; no blood in stools. Bismuth subnit., gr. x, pulv. ipecac comp., gr. iii, were given every two hours. Morning pulse, 90; temp., 101; evening pulse, 102; temp., 104; tongue somewhat brown. In afternoon gave pulv. ipecac, gr. xxv, twice, with Magendie's sol., m. viii, each time.

On 29th, bowels continued very loose with mucus; no blood; pain in epigastrium; tongue brown. Ipecac. pulv., gr. xxv, twice during day; enemata of boiled starch, ℥i, tinct. opii., m. x, after each passage.

Same treatment continued until Oct. 1st, symptoms being somewhat abated, when he was put upon bismuth subnit., gr. x, pulv. opii., gr. ss, every three hours; six passages during day; mucus, but no blood. Morning pulse, 95; temp., 99; evening pulse, 90; temp., 100¼. Complains at times of severe tenesmus and is relieved by morph. sulph. hypodermically.

Treatment continued until the 5th, patient becoming gradually worse; tongue heavily coated and of yellowish color; fifteen to twenty passages daily; blood and mucus; odor extremely offensive. Pulse 90 to 100 and weak; temp. running about 100 in morning to 102 in evening; spts. frumenti increased.

Treatment changed to tinct. opii, m. x, plumbi acet., gr. ii, every three hours; ice-water injections ordered. Diet consists entirely of milk, with four ounces of whisky daily. Oct. 7, ice-water injections used four times in past twenty-four hours; patient complained of much distress when injections were given, but his condition seems improved this evening.

No special change until the 9th, when he commenced vomiting nearly everything which he took into his stomach. Vomited matter consisted of a watery fluid of bluish green color, and masses of curdled milk; still fifteen to twenty passages daily; now watery and dark colored; odor not so offensive; morning pulse, 76; temp., 96; evening pulse, 90; temp., 98. Milk and whisky were ordered by visitant to be given hot night and day, and the following prescribed: ol. terebinth., m. x, quin. sulph., gr. i, pulv. opii., gr. i, in capsules every three hours. Capsules were continued about thirty-six hours, many of them being vomited. By consultation, Drs. Armor, Dudley, Bunker, Colton and McCorkle being present, treatment was changed to hydrarg. chlor. mit., gr. ss, every two hours until six doses were taken. No beneficial result was noticed.

All internal medication was discontinued on the 14th. Patient was ordered to be kept in bed in horizontal posture, perfectly quiet; bed-pan to be used for all evacuations; to be washed all over night and morning with luke-warm water, anointed with cod-liver oil, and muscles well kneaded.

Patient complained seriously that it was impossible for him to use the bed-pan retaining the recumbent posture, and much difficulty was experienced in enforcing it.

Vomiting continues; ten to twelve passages; morning pulse, 90; temp., 95½; evening pulse, 90; temp., 98.

A specimen of the green vomit was given to Dr. Bartley for examination. His report, which is subjoined, suggested a portion of the subsequent treatment.

An erythematous eruption appeared all over patient's body on the 16th. In twenty-four hours it had become very similar to the eruption of measles, but there was no change from previous temperature. This remained until the 19th, when it commenced to fade, and was scarcely perceptible in forty-eight hours. Soon after all internal medication was discontinued—patient became better; vomiting became less; stools more fecal in character and normal in odor; tongue began to clean off; appetite improved. Before the vomiting of this green material entirely ceased, small doses of dilute sulphurous acid were exhibited internally; vomiting then ceased altogether; passages became fewer in number and nearly normal in character.

His entire diet until the 14th was milk. After that, baked flour, prepared as follows, was added to the milk: Put five lbs. of flour in cotton bag; pressed it tightly and tied; boiled in water eight hours; cut off the watery portion of the mass and shaved the central part, which was dry and friable, to fine powder; a tablespoonful to a glass of milk. An occasional hot soup was allowed, and he soon returned to solid food.

Pulse ranged, during most of his sickness, between 90 and 100; sometimes rose as high as 108; at times fell to 80. Temperature was above normal for the first two weeks, ranging from 99 to 102; once arose to 104; generally from one to two degrees higher at night. For the next twelve days temperature was found in the morning from one to two and a half degrees below normal; in the evening about normal. After that time, Oct. 23, it continued slightly above normal. He left hospital Nov. 5, recovered in every respect, except that he had five or six evacuations daily.

REPORT, BY E. H. BARTLEY, M.D., UPON THE EXAMINATION OF A SPECIMEN OF GREEN-VOMIT IN THE CASE OF ZACHARIUS CHRISTIANSEN.

The color of the vomited matter was grass-green, and consisted of a green somewhat turbid fluid, and a grayish-green solid, which, after a few hours' standing, separates and floats near the top of the liquid. Upon filtering through a single filter-paper, a green filtrate is obtained. But on filtering this through several papers folded together, or through a layer of pure-washed sand, it becomes colorless.

The residue upon the paper becomes of a deeper green color on drying. Alcohol behaves with it as does water. Chloroform and ether fail to take up any of the coloring matter. When the green filtrate above mentioned is shaken up with ether, there separates out three layers: first, the layer of ether at the top, the slightly-colored aqueous solution at the bottom, and a layer between these which contains the most of the coloring matter and the coagulated mucus. Chemical reaction acid: Alkalies change the color to brownish-yellow, which is partially restored by acids. Strong nitric acid produces at first a blue, which passes gradually through the violet to yellow. Pettinkofer's test with H_2SO_4 and cane sugar gives no indication of biliary acids.

Submitted to spectroscopic examination, it gives no characteristic spectrum. At the close of the nitric acid test, just as the violet is fading into yellow, there is to be seen a very faint absorption band between (b) and (F), and almost exactly bounded by F. This band coincides with a band seen in this test with bile pigments; but the band between C and D, also seen in this test when bile is used, could not be seen.

The whole behavior of the liquid, therefore, seemed to indicate that the coloring matter is not in solution, but in suspension; which is further indicated by the fact that both the aqueous and alcoholic extract became decolorized after long standing, depositing a sediment at the same time.

Microscopical examination shows the green matter to be composed of minute green cellular bodies, some of which are possessed of spontaneous movement. They are circular in appearance, highly refractive, and possess a distinct nucleus.

The color of the cells, as described by several observers, was bluish-green. Their diameters varied between $\frac{1}{10000}$ and $\frac{1}{30000}$ in. in diameter, and smaller; they are very little effected by ascetic acid, if at all. Ether shrivels them, but does not dissolve them. After thorough filtration, to remove the color from the solution, these bodies were only found after considerable search. These same living, moving cells were also found, mixed with yellow and apparently dead ones, in a specimen of yellow vomit from the same patient a few days later.

Besides the above-described organisms, the examination shows the larger amount of the color to be due to a minute punctiform deposit collected in discoid heaps, or situated on epithelial or mucous cells. No distinct structure could be made out, except that, like the others, they were highly refractive, circular in appearance, and when aggregated together, show a decided green color. The arrangement of these granules upon the epithelial cells gave very much the appearance of the chlorophylle granules in the cells of plants.

Whether these very small granules differ from the larger ones above described in anything excepting size, I am unable to say; but I think not. The cause of the green color, therefore, in this specimen of green-vomit, seems to be the existence of a minute green organism, which has received the name of chlorococcus by Dr. F. Betz, who has described a similar organism found by him in green-vomit. (*Memorabilien*, Oct. 6, 1880; also *Lond. Med. Record*, Feb. 15, 1881; *Med. News and Abstract*, April, 1881, page 226.)

In most respects, my observations agree with his. The treatment of the case was based upon this examination, and consisted of dilute sulphurous acid.

The above case being under my care, I beg leave to call the attention of the Society to the following points of interest, from a therapeutic standpoint:

1st. Inunctions of oil in exhaustive diseases and massage.

2d. Position of patient during the act of defecation.

3d. The antiseptic treatment based upon a chemical analysis of the vomited matter.

In intestinal fluxes and most of the exhaustive diseases where emaciation is great, and the muscular system fast yielding its substance to supply the waste, inunctions of oil and massage are useful measures.

By keeping up the function of an organ, its integrity is maintained. "The stimulus to action in a muscle is a stimulus to its nutrition," and the blood and nutritive material necessary for the maintenance of its function are diverted from the channels of waste; thus the physiological energies are conserved. If this physiological fact were better appreciated, more satisfactory results would follow the treatment of many diseases.

2d. The position of the patient is an important factor in the treatment of dysentery. In hospital and private practice I insist upon the use of the bed-pan, with the body in the horizontal position. If the patient be allowed to use the chair, the effort at straining, aided by the action of the abdominal muscles, will knead the inflamed intestines, thereby increasing the difficulty. Some patients say they cannot use the bed-pan; all the better; an opium and belladonna suppository will quiet the tormina and tenesmus and allow the inflamed bowel to remain in a state of quietude, the condition most favorable to recovery. All this is simply in accordance with the well-known therapeutic law, ''Rest for an inflamed organ."

3d. The antiseptic treatment was not fully tested in this case, for the patient was slowly improving without medication, but the convalescence was much more rapid after the administration of sulphurous acid than before; the vomited matter soon lost its bluish-green color, and the nausea and vomiting became less frequent, and soon ceased entirely.

In dysentery vitiated secretions are liable to be absorbed at any time from the intestinal canal, and when absorption does take place, typhoid symptoms quickly supervene. Antiseptics give promise of great usefulness in this condition.

In the light of existing knowledge, and the advancements now being made in the study of pathology and physiological chemistry, there is ground for hope that the antiseptic treatment, so extensively and successfully practiced in surgery in the treatment of external wounds, will attain an equal degree of usefulness in the management of internal diseases.

THE MEDICAL SOCIETY OF THE COUNTY OF KINGS.

The 61st Annual meeting of this Society was held on Tuesday, January 17th, 1882, at No. 398 Fulton Street, the President, DR. JEWETT, in the Chair, DR. WYCKOFF, Secretary. The meeting was called to order shortly after 8 P. M., about sixty members being present.

The minutes of the December meeting were accepted as printed in the PROCEEDINGS. The Secretary then read the minutes of a special meeting, held December 30th, 1881, for the purpose of nominating delegates to the State Medical Society. They were adopted. Dr. Squibb asked whether the approval of those minutes by this meeting would be sufficient as a legalization of the nominations, they having been made a little out of their regular order as to time.

THE CHAIR decided that the adoption of the minutes of that meeting virtually ratified the nominations; and, no objections being made, he declared the nominations to be legalized.

The following applications for membership were presented:

By Dr. Paine—Dr. William E. Spencer, 164 Clermont Avenue. By Dr. Woodhull—Dr. Mary S. Williams, 395 Sixth Avenue. By Dr. Emery—Dr. Henry A. Bunker, 99 Sixth Avenue. By Dr. Wyckoff—Dr. John W. Sherfy, 703 Fourth Avenue, and Dr. Frederick A. Baldwin, 547 Willoughby Avenue.

THE COUNCIL reported the acceptance to membership of the following: Washington J. Brandt, M.D., Coll. Ph. and Surg., N. Y., 1880; Wm. J. Cruikshank, M.D., N. Y. Univ., 1880; Daniel K. Drake, M.D., L. I. C. H., 1880; Wm. B. Mathewson, M.D., L. I. C. H., 1881; and Alexander F. Horton, M.D., L. I. C. H., 1881.

DR. HUTCHINS called attention to the fact that the work of the Censors has been, for some time past, obstructed and retarded in the examination of credentials of candidates for membership in this Society, for want of an endorsement and recommendation on the part of some member of the Society. It would facilitate the work of the Board of Censors if a written endorsement of these credentials accompanied them when presented for examination.

DR. SQUIBB said that this statement should be made as coming from the Board of Censors, and be published in the minutes. He therefore moved that this statement be accepted as a recommendation made by the Censors, and that it be placed on the minutes. So ordered.

THE TREASURER then read the statistical portion of so much of his report as showed that six members had been dropped for non-payment of dues. Their names were given to the tellers as ineligible to vote or hold office.

THE SECRETARY read his list of delinquents, by which it appeared that of those elected members during the past year, only two had failed to join within the due limit of time established by by-law.

THE SECRETARY called attention to some micro-photographs presented by an esteemed former member of this Society, Dr. Kidder, of the Naval Laboratory, at Washington, which he submitted to the members for inspection. They represented examinations of atmospheric air by atomization and condensation, and were photo-micrographs of about 300 diameters.

The rules for governing the election were then read by the President and adopted. They were the same as those in use for several years past.

TELLERS.—The Chair requested Drs. Rochester, Campbell, Walker, Rand, H. F. Williams, Paine and De La Vergne to act as Tellers.

ELECTION. The Society were then instructed to prepare the ballots. Dr. Reese requested his name to be withdrawn as a candidate for Secretary. The same request was made by Dr. Walker as a candidate for Librarian, and Dr. Watt as candidate for Treasurer.

Ballots were then cast, and while they were being counted, the Treasurer made his financial report. On motion, it was accepted and referred to an Auditing Committee consisting of Drs. Hopkins and Burge, who, after examination, reported that they had compared the vouchers with the items as entered upon the Treasurer's books, and found the accounts correct. Report adopted.

The recommendations of the Treasurer were then acted upon.

1st Recommendation.—"That the annual dues for 1882 be not less than five dollars."

Dr. Squibb moved that the recommendation of the Treasurer's be amended so as to make the annual dues for 1882 in accordance with the resolution offered by the Committee on the PROCEEDINGS, of which he was chairman. (See Minutes in January PROCEEDINGS.)

Resolved, That the annual dues to the Society for 1882, from those members who voluntarily pay the money into the hands of the Treasurer within the first quarter of the year, or before May 1st, shall be $5.00. From those members who voluntarily pay the money into the hands of the Truasurer after May 1st, and before October 1st, the annual dues shall be $5.25. After October 1st, the unpaid annual dues shall be placed in the hands of a collector, and shall then be $5.60, and shall continue to be $5.60 during the year. But if not paid within the year they shall be $5.75 until paid, or until the members be dropped for non-payment, according to the by-laws and rules already in operation.

Seconded. The motion was discussed by Drs. Squibb, Wight and Hutchins, and adopted. [At this point the polls were closed.]

The second recommendation of the Treasurer was then adopted, namely, "That twenty-five copies of the PROCEEDINGS be bound, at a cost not to exceed 75 cents a copy."

The third recommendation was also adopted without debate, namely, "That the Transactions of the State Society for the years 1881 and 1882 be furnished to such members as desire them at *one dollar* per volume, and that the officers of the Society and members of its committees be entitled to receive, each one, a copy gratis. Should the volumes of TRANSACTIONS for 1882 be supplied at a cost less than one dollar per volume, the reduced cost shall be the price charged to members.

The next order being the scientific business of the evening, the report of the Therapeutic Committee on Grindelia Robusta, Dr. McCorkle, Chairman, was called for. This was read by title by Dr. Hutchins for the Chairman.

DR. HUTCHINS also read by title a Report of a Case of Dysentery, by Dr. J. A. McCorkle.

The report of the PROCEEDINGS Committee was next taken up. The report having been read at the last meeting, and published in full in the PROCEEDINGS for January, it was not re-read. The resolutions were taken up *seriatim* and adopted without opposition, together with the explanatory preambles, as printed in the last issue of this journal.

The journal of the Council for the past year was then read by the Secretary.

THE TELLERS made a report to the effect that the election had resulted in a choice for all the officers except for Assistant Secretary. The Chair directed that a second ballot be taken for Assistant Secretary—the names of Drs. Kretzschmar and Rand having been withdrawn from nomination.

The report of the Librarian was then made and accepted and ordered on file.

Amendments to by-laws were then considered.

First, To Ch. X., Section 1: Instead of "The officers of the Society shall constitute the Council," read "The officers of the Society, with the ex-Presidents of the Society, shall constitute the Council." This proposed amendment was discussed in a very humorous vein, and rejected.

Second, To Ch. XV. Add new Section: "The annual assessment of the Society shall not exceed the actual and necessary expense, as estimated for the current year." The mover of this resolution stated that he had no recollection of having offered it.

Third, Ch. XV. Add new Section: "All members of this Society of less than three years' standing in the profession, be liable for dues of current year at not more than $1.00 for each year they have been practicing their profession. If the dues are not paid within the current year, they become liable for the full assessment." This matter had been disposed of earlier in the evening. On motion of Dr. Hopkins, both amendments were laid upon the table.

The Committee of Building, Dr. Hopkins, Chairman, had no report to submit.

The Committee on the Physicians' Mutual Society was read by Dr. Reese, Chairman, and accepted. The Tellers, through Dr. Williams, rendered their report as follows, which was accepted and adopted:

Office.	Candidate.	Number of Votes Cast.	Necessary for Choice.	Number Received.	Result.
For President	C. Jewett	57	29	56	Elected.
For Vice-President	G. G. Hopkins	59	30	31	"
For "	G. W. Baker	59	30	16	
For "	W. Wallace	59	30	12	
For Secretary	R. M. Wyckoff	56	29	52	"
For "	W. W. Reese	56	29	4	
For Assistant Secretary	W. G. Russell	56	29	36*	"
For " "	J. B. Mattison	56	29	20	
For Treasurer	J. R. Vanderveer	59	30	52	"
For "	J. Watt	59	30	7	
For Librarian	T. R. French	55	28	44	"
For "	J. Walker	55	28	11	
For Censors (5)	A. Hutchins			53	"
	J. D. Rushmore			38	"
	B. F. Westbrook			37	"
	A. Segur			34	"
	A. R. Paine			24	"
For Del. to the Med. Soc. of the State of N. Y. (12.) (1882–1886.)	C. Jewett			42	"
	B. F. Westbrook			40	"
	F. W. Rockwell			37	"
	J. A. McCorkle			37	"
	G. G. Hopkins			37	"
	G. W. Baker			36	"
	T. R. French			36	"

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* This result was obtained at the second ballot.

J. D. Rushmore	35[†]	Elected.
S. Sherwell	34	“
J. H. Hunt	33	“
J. C. Shaw	31	“
J. Byrne	30	“

In regard to Delegates to the American Medical Association, the Chair stated that for the past few years the ticket had been made up under the direction of the Society by the Council, and the ballot deposited by the Chair. As directed by the December meeting, the ballot has been prepared and will be deposited as the vote of the Society. The following were then declared as elected Delegates to the American Medical Association :

Drs. J. S. Andrews, S. G. Armor, G. W. Baker, H. L. Bartlett, John Byrne, A. W. Catlin, Alex. S. Clarke, L. C. Gray, Alex. Hutchins, J. C. Hutchison, E. A. Lewis, W. H. Martin, A. R. Matheson, A. Mathewson, J. B. Mattison, J. A. McCorkle, Andrew Otterson, A. R. Paine, Ernest Palmer, J. S. Prout, W. H. Rand, J. H. Raymond, H. N. Read, W. W. Reese, J. D. Rushmore, W. G. Russell, J. C. Shaw, A. J. C. Skene, E. R. Squibb, Jerome Walker, R. L. Van Kleek, Wm. Wallace.

The report of the Medico-Legal Committee, Dr. Gray, Chairman, was next considered. Dr. Gray repeated his report substantially as printed in the Minutes of the December meeting (Jan. No. of Proceedings).

Dr. Walker moved that the Medico-Legal Committee be requested to confer with the members of the Bar, for the purpose of forming a society, provided this Society are not made liable for any part of the expenses resulting therefrom. Seconded.

Dr. Hopkins said that, while he did not wish to reflect in any way upon the Committee, who had presented from time to time a great deal of valuable information to the Society, yet he hoped that the motion would not prevail. He moved to lay the subject on the table. Carried.

Dr. Hutchins presented two petitions; first, praying the society to enact proper measures to facilitate pathological study; and secondly, a proposition from the Dental Society, asking permission to place specimens in the Reading-Room, and to place files of journals in the book-case, by bearing proportionate amount of expense. Referred to the Council.

Dr. Read presented the annual report of the Library Fund Committee, giving the titles of books purchased for the library during the past year, statement of funds collected, and the use to which they were put. The amount collected was $300. A list of the books purchased in 1880 and 1881 would be found upon the printed list.

On motion of Dr. Squibb, the report of the Committee was accepted, placed on the minutes, and ordered printed in the Proceedings. He also expressed his obligations to the Committee, and he felt that he voiced the sentiments of the Society, for the good work which they had done.

The following were declared members elect of the Society: Drs. Dana C. Lewis, Jacob Nehrbas, John Mears, and Henry McHatton.

On motion, the Society adjourned.

[†] Dr. Skene having 35 votes, was declared elected, but he resigned the position by reason of inability to serve.

REPORT OF THE LIBRARIAN, 1881.

The Librarian takes pleasure in reporting a prosperous condition of the department of which he has had charge. Our accommodation for books is about exhausted, all the cases and shelves in the Reading-Room being full. If the pace at which the Library Committee have supplied us with books continues, new accommodations will soon have to be afforded.

As a result, largely, of the tireless activity and interest of the editor of the PROCEEDINGS of this Society, we have now in the Reading-Room, in addition to other valuable matter, numerous complete files of Journals, all bound and valuable.

The following list comprises the bound volumes of complete files:

Boston Medical and Surgical Journal	Complete,	1829 to 1881.
London Lancet	“	1824 to 1881.
Philadelphia Medical Times	“	1870 to 1881.
Medical Record	“	1866 to 1881.
New Remedies	“	1872 to 1881.
Compendium of Medical Sciences	“	1868 to 1881.
Braithwaite's Retrospect	“	1840 to 1881.
Obstetrical Journal, Great Britain and Ireland	“	1873 to 1880.
New York Medical Journal	“	1843 to 1881.
American Journal Obstetrics	“	1869 to 1881.
The Practitioner	“	1868 to 1881.
Medical and Surgical Reporter	“	1858 to 1881.
American Journal Medical Sciences	“	1826 to 1881.
Transactions Medical Society State of New York	“	
Transactions American Medical Association	“	

In addition to the 77 books purchased and placed on the library shelves by the Library Committee this year, the following have been donated:

Contributions to Orthopedic Surgery, by J. C. Hutchison, M.D.

Report of a case of recurrent femoral aneurism treated with success by cat-gut ligature of the external iliac, by J. C. Hutchison, M.D. Donated by the author.

Pamphlet. In memory of Edouard Seguin, M.D.

Report of the Pennsylvania Hospital for the Insane, for the year 1880.

Kirkbride on Hospitals for the Insane; 2d Edition. Donated by Dr. D. L. P. Brockett.

United States Index Medicus, A to Ch., inclusive; 2 Vols. Donated by Dr. J. S. Billings, U. S. Army.

Medical and Surgical Reports Boston City Hospital. 1st Series.

Medical Reports Boston City Hospital. 2d Series.

Second Annual Report of the State Board of Health, Lunacy and Charity—1880.

Thirty-ninth Registration Reports. Mass. 1880.

First Annual Report of the Board of Health of the city of Boston—1873. Donated by Dr. Sam'l A. Greene, Boston, Mass.

The Medical Work of Dr. Michael Ettmuller, Professor in the University of Leipsic. Printed in Frankfort-on-the-Main in 1697. 2 Vols. Very rare. Donated by Dr. E. G. Bogert, Surgeon U. S. Navy.

Wight on the Size and Weight of the Body and its Organs.

Wight on Myodynamics.

"Watson's Practice of Physic." Condie.
Toland's Lectures on the Practice of Surgery.
Beard and Rockwell Medical and Surgical Electricity.
Miller's Practice of Surgery.
Ford's Questions.
Erichsen's Science and Art of Surgery. Vols. 1 and 2.
Smith's Handbook of Surgical Operations. Donated by Dr. Jarvis S. Wight.

Respectfully submitted,
T. R. French, M.D.,
Librarian Medical Society County of Kings.

REPORT OF LIBRARY COMMITTEE.

Your Committee beg to submit the following report: It having been ordered by the Society that the Library Committee continue its work through the year 1881, the President reappointed the former Committee of thirteen, with instructions to continue the business of soliciting subscriptions and providing books. Drs. Wallace, Gray and Wilber having resigned from the Committee, Drs. Campbell, Lewis, and Pendleton were appointed in their stead. Your Committee pursued the same plan of work as that formerly adopted. The city was divided into thirteen districts, and a member assigned to each district to solicit subscriptions. A meeting of the whole Committee was held early in the spring, and work immediately thereafter begun. The whole amount collected was $295.52. The same plan pursued formerly was adopted, namely, the endeavor to have *every member* subscribe a small sum, rather than a few subscribe large amounts. That the Society appreciate the endeavor to collect a good library, your Committee regard an accomplished fact. That they are willing to pay for it, is shown by the subscribing of $514.61 last year, and $286.52 this; and your Committee can again congratulate this body on the willingness and public spirit evinced. With a very few exceptions, every member has not only given money, but has encouraged the Committee members by words of commendation, and have expressed themselves as desirous in forwarding the work by any means in their power; and the business of soliciting, never in itself a pleasant duty, has lost many of its disagreeable features in this instance through the popularity of the scheme. Ten meetings of the Committee and Executive Committee were held, and to the selection and purchase of the books much consultation and care was given. The plan before followed was again put in practice as to the choice of works. Various members of the Society, distinguished by their special pursuits or general cultivation, were consulted with, and views were exchanged with different gentlemen on this important subject. Whether the selections are good and useful ones, the Society, not the Committee, must judge. The purchase of the books was awarded to the lowest bidder by contract, and Presley Blakiston, of Philadelphia, obtained the award. In concluding, your Committee must again congratulate the Society on the enthusiasm and earnestness evinced in this work. They can truly affirm that the project of having a library connected with our Society, has passed the experimental stage. It is accomplished. We have the nucleus of an excellent library, and what is much more to the purpose, your Committee believe that the Kings County Society is *determined to have* a library, and good one; that the beginning, which is so promising, is not to be suffered to languish and die, but that a sustained effort will be made and kept up. The use of the library is becoming more and more general among the members. Many read here now who never thought of doing so a year ago; and examination and inspection of the books is requested and urged by your Committee, that the members may see whether their individual wants are supplied, and that they may use and enjoy their own property; your Committee believing that there is no surer way of keeping up the subscription to the Library Fund than by having the members inspect and use the books. Annexed will be found the catalogue of books purchased this year.

A. Campbell, M.D.; J. H. Hunt, M.D.; E. A. Lewis, M.D.; A. Hutchins, M.D.; A. R. Matheson, M.D.; E. Pendleton, M.D.; H. W. Rand, M.D.; H. N. Read, M.D.; J. E. Richardson, M.D.; F. W. Rockwell, M.D.; W. G. Russell, M.D.; H. F. Williams, M.D.; T. R. French, M.D., *Chairman Committee on Library.*

Brooklyn, January 17th, 1882.

LIST OF MEDICAL AND SURGICAL WORKS

PURCHASED BY THE

Library Committee of the Medical Society of the County of Kings, 1880 and 1881.

ANATOMY AND PHYSIOLOGY.

- *Balfour. Comparative Embryology.
- Bock. Atlas of Human Anatomy.
- Braune. Atlas of Topograpical Anatomy.
- *Dwight. Frozen Sections of a Child.
- Herman. Human Physiology.
- Humphrey. The Human Skeleton.
- Klein's Anatomy of the Lymphatic System. 2 vols.
- *Luschka. Anatomy of the Larynx.
- *Ranney. Applied Anatomy of the Nervous System.

BRAIN, NERVOUS SYSTEM AND INSANITY.

- Anstie. Neuralgia, etc.
- Charcot. Diseases of the Brain.
- *Ferrier. Functions of the Brain.
- Hamilton on Nervous Diseases.
- *Jones on Nervous Disorders.
- Liveing. Megrim and Sick Headache.
- *Maudsley. Physiology of the Mind.
- *Maudsley. Pathology of the Mind.
- Mitchell. Injuries of Nerves.
- *Ross. Diseases of the Nervous System. 2 vols.
- Tuke. Insanity and its Prevention.
- *West. Disorders of the Nervous System in Childhood.

CHEMISTRY.

- Roscoe and Schorlemmer's Chemistry. 3 vols.
- *Blyth. Food and Poisons.

* Purchased 1881.

CHEST (Diseases of).

Balfour. Diseases of the Heart.
Bennett. Pulmonary Consumption.
Buhl. Inflammation of the Lungs.
*Clapp. Auscultation and Percussion.
*Dobell. Coughs, Consumption and Diet.
Flint on Phthisis.
Flint on the Respiratory Organs.
Flint's Percussion and Auscultation.
Fothergill. The Heart and its Diseases.
Greenhow. Chronic Bronchitis.
Hayden. Diseases of the Heart and Aorta. 2 parts.
Powell on Consumption.
*Thoroughgood. Notes on Asthma.
Williams. Pulmonary Consumption.

CHILDREN (Diseases of).

*Guersant. Surgery of Children.
*Holmes. Surgery of Children.
Meigs and Pepper. Diseases of Children.
Smith. Diseases of Children.
Smith. Wasting Diseases of Children.
Steiner. Compendium of Children's Diseases.
Vogel. Diseases of Children.

DICTIONARIES.

*Blyth. Dictionary of Hygiene and Health.
Dunglison's Medical Dictionary.
Cutter. Dictionary of the German Terms Used in Medicine.

ELECTRICITY.

Beard and Rockwell. Medical and Surgical Electricity.

EAR.

Burnett. Treatise on the Ear.

EYE.

*Mauthner. Sympathetic Diseases of the Eye.
*Nettleship. Diseases of the Eye.

KIDNEYS, LIVER, ABDOMEN.

Dickinson. Albuminuria.
Dickinson. Diabetes.
*Greenhow on Addison's Disease.
Habershon on the Alimentary Canal.
Johnston on Bright's Disease.
Murchison. Diseases of the Liver, Jaundice and Abdominal Dropsy.
Roberts. Urinary and Renal Diseases.

MATERIA MEDICA, THERAPEUTICS AND TOXICOLOGY.

Bartholow. Materia Medica and Therapeutics.
*Flückiger and Hanbury. Pharmacographia: A History of Drugs.
*Gubler. Principles of Therapeutics.
*Naphey. Medical Therapeutics.
*Naphey. Surgical Therapeutics.
Ringer. Handbook of Therapeutics.
*Stillé's Therapeutics and Materia Medica. 2 vols.
Wood. Therapeutics, Materia Medica and Toxicology.

MISCELLANEOUS.

*Beale. Protoplasm.
*Bennett. Nutrition in Health and Disease.
Buck. Hygiene and Public Health. 2 vols.
Chamber's Manual of Diet.
Cobbold. Entozoa.
Fox on the Artificial Production of Tubercle.
*Ewald. Lectures on Digestion.
*Garrettson. A System of Oral Surgery.
Legg. Hæmophilia.
Marsden on Cancer.
Mitchell. Fat and Blood.
Taylor's Medical Jurisprudence. 2 vols.
*Woodman and Tidy. Forensic Medicine and Toxicology.
Wormley on Micro-Chemistry of Poisons.

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* Purchased 1881.

OBSTETRICS.

*Atkinson. Hints in Obstetric Procedures.
*Aveling. Posture in Operations.
Barnes' Obstetric Operations.
Cazeaux's Midwifery.
*Glisan. Text Book of Modern Midwifery.
*Parry. Extra Uterine Pregnancy.
Playfair's Midwifery.
Simpson's Obstetric Memoirs.

PATHOLOGY AND HISTOLOGY.

Cornil and Ranvier's Pathological Histology.
Creighton. Physiology and Pathology of the Breast.
*Creighton. Bovine Tuberculosis in Man.
*Delafield. Post-mortem Examinations and Morbid Anatomy.
Green. Pathology and Morbid Anatomy.
Paget. Surgical Pathology.
Rindfleisch. Pathological Histology.
*Satterthwaite. Manual of Histology.
Virchow. Cellular Pathology.
Virchow. Post-mortem Examinations.
Wilks and Moxen. Pathological Anatomy.

PRACTICE OF MEDICINE.

Aitkin. Practice of Medicine. 2 vols.
*Bristowe. Theory and Practice of Medicine.
Da Costa. Medical Diagnosis.
Flint's Clinical Medicine.
*Fothergill. Indigestion and Biliousness.
Mackenzie. Diphtheria.
Niemeyer. Practical Medicine. 2 vols.
Reynolds' System of Medicine. 3 vols.
*Roberts. Theory and Practice of Medicine.
Tanner's Practice of Medicine. 2 vols.
Trousseau's Clinical Medicine. 2 vols.
*Wood. Fever.

SKIN DISEASES.

*Duhring. Atlas of Skin Diseases.
Fox. Skin Diseases.
Piffard. Diseases of the Skin.
*Wilson. Ringworm.

SURGERY.

Adams. Club-Foot.
Adams on Finger Contractions and Depressed Cicatrices.
Allingham. Diseases of the Rectum.
*Annandale. Diseases and Injuries of Fingers and Toes.
Ashhurst. Principles and Practice of Surgery.
*Barwell. Curvature of the Spine.
*Bigelow. Mechanism of Dislocations and Fractures of the Hip.
Broadhurst. Orthopædic Surgery.
*Bryant's Practice of Surgery.
Buck. Reparative Surgery.
Clark. Diseases of the Tongue.
*Curling on Diseases of the Testis.
Dieulafoy. Pneumatic Aspiration.
*Gamgee. Treatment of Wounds.
Gant's Practice of Surgery. 2 vols.
*Guthrie. Injuries of the Head.
*Gross. Foreign Bodies in the Air-Passages.
Hamilton's Surgery.
*Hamilton on Fractures and Dislocations.
Holmes. System of Surgery. 4 vols.
Hutchinson's Illustrations of Clinical Surgery. 1 vol. and 3 parts.
*Hutchinson's Illustrations of Clinical Surgery, Fasciculus XIV.
*Longmore. Gunshot Injuries.
Markoe. Diseases of the Bones.
Mason. Surgery of the Face.
*McCormack. Antiseptic Surgery.
Sayre. Spinal Diseases and Curvature.
*Smith. Surgery of Deformities.
Surgery in the Pennsylvania Hospital.
Thomas. Intestinal Obstructions.
*Van Buren. Diseases of the Rectum.
Wyeth. Surgical Anatomy and Surgery.

* Purchased 1881.

THROAT AND NOSE.

Browne on Diseases of the Throat.
Cohen. Diseases of the Throat and Nasal Passages.
Mackenzie on Laryngeal Growths.
Thornton on Tracheotomy.
Watson. Diseases of the Nose.
Wyman. Autumnal Catarrh.

GENITO-URINARY AND VENEREAL DISEASES.

Bartholow. Spermatorrhœa.
Bumstead and Taylor. Venereal Diseases.
*Fournier. Syphilis and Marriage.
*Gross. Disorders of the Male Sexual Organs.
*Harrison. Surgical Disorders of the Urinary Organs.
Keyes. Treatment of Syphilis.
Lewin. Treatment of Syphilis.
Otis. Stricture of the Male Urethra.
*Thompson. Diseases of the Urinary Organs.
Van Buren and Keyes. Genito-Urinary Diseases with Syphilis.

WOMEN (Diseases of).

*Atkinson. Therapeutics of Gynecology and Obstetrics.
Barker. Puerperal Diseases.
Barnes on Diseases of Women.
*Duncan. Lectures on Diseases of Women.
Emmet's Principles and Practice of Gynecology.
Goodell. Lessons in Gynecology.
Ercolani on the Utricular Glands of the Uterus.
*Martin. Atlas of Gynecology and Obstetrics.
Sims. Uterine Surgery.
Thomas on Diseases of Women.
Wells. Diseases of the Ovaries.

WOOD'S LIBRARY, 1879.

Clark. Manual of Surgery.
Ellis. Manual of the Diseases of Children.
Frerichs. Diseases of the Liver. 3 vols.
Hilton. Rest and Pain.
Phillips. Materia Medica and Therapeutics.
Rosenthal. Diseases of the Nervous System. 2 vols.
Routh. Infant Feeding.
Tait. Diseases of Women.
Wardell. Diseases of the Intestines and Peritoneum.

WOOD'S LIBRARY, 1880.

Buck. Diseases of the Ear.
Gutmann. Physical Diagnosis.
Keyes. Venereal Diseases.
Mackenzie. Pharynx, Larynx and Trachea.
Mundé. Minor Surgical Gynecology.
Poulet. Foreign Bodies in Surgery. 2 vols.
Putzel. Functional Nervous Diseases.
Savage. Surgery of Female Pelvic Organs.
Trousseau's Therapeutics. 3 vols.

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* Purchased 1881.

*WOOD'S LIBRARY, 1881.

Dickinson. Albuminuria.
Coulson. Diseases of the Bladder.
Charcot and Loomis. Diseases of Old Age.
Barwell. Diseases of the Joints.
Piffard. Materia Medica and Therapeutics of the Skin.
Wilson. The Continued Fevers.
Johnson. A Medical Formulary.
Witthaus. General Medical Chemistry.
Lyman. Artificial Anæsthesia and Anæsthetics.
Pavy. Food and Dietetics.
Noyes. Diseases of the Eye.
Tilt. Handbook of Uterine Therapeutics

HEALTH PRIMERS.

Brain Work and Overwork.
Eyesight and How to Care for it.
Hearing and How to Keep it.
Our Homes.
Long Life and How to Reach it.
The Mouth and the Teeth.
Sea-Air and Sea-Bathing.
The Summer and its Diseases.
The Throat and the Voice.
The Winter and its Dangers.

REPORT OF THE COMMITTEE ON THE PHYSICIANS' MUTUAL AID ASSOCIATION.

The report of the Committee for the past year is necessarily brief. Whilst the number of meetings held was fewer and more thinly attended than it was intended they should be by the members when they entered upon their duties, nothing has transpired to discourage their first impression—that when the members of the profession shall make themselves better acquainted with the purposes and operations of the Association, but few, if any, will be found who will not be desirous to become members, and do all they well can for its increase and greater usefulness.

By the last report of the Board of Trustees, presented November 10th, we find that the whole number of members then was 398—an increase during the past year of 48 new members. The decease of five members had occurred in the year, to whose families $1,540 had been paid, with $455 still remaining in the Assessment Fund. The balance on hand of the Contingent Fund was $226.68, after paying all the current expenses of the year, amounting to $187.93, for printing, stationery, and a small amount for clerk hire for the Treasurer. The services of all the officers are, and always have been, rendered gratuitously—a very unusual circumstance, we believe, in such organizations.

The Permanent Fund now amounts to $8,858.76, with a prospect of it reaching at an early day the sum of $10,000, when, in accordance with the By-laws, the proceeds of it may be used for benevolent purposes.

It may be safely asserted that the Association is based upon correct and sound principles, and has been conducted with a view solely to its permanency and impartial and liberal aid to the families of deceased members. By the continuance of rigid and judicious economy in all expenditures and investments on the part of the Board, and the unselfish rendering of their services by the officers—both of which seem to your Committee to be guaranteed by the past management of the Trustees—there can be no doubt

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* Purchased 1881.

that all just claims will continue to be promptly and satisfactorily met. During the past seven years there has been paid to the families of deceased members the amount of $14,446.51, and since organization, that of $22,310.81.

Of the 48 new members added during the past year, over one-half of the number were applicants from this city, and obtained mainly by the personal efforts of an industrious member of this Committee residing in the Eastern District. The initiation fee in all cases is only $2, and the assessment $1 or $2, according to the age of the member at time of initiation. No extra or other tax on the members has ever been made, nor is any anticipated under any circumstance that might arise.

In conclusion, your Committee would recommend that a committee be appointed for the current year, to further canvass the profession by personal calls and the diffusion of information that will lead to a better appreciation of the claims of the Association upon them, inasmuch as we believe that such a course would largely increase the membership from this Society.

Respectfully submitted,

William W. Reese, M.D., *Chairman;* N. W. Leighton, M.D.; B. A. Segur, M.D.; G. W. Baker, M.D.; Alex. Hutchins, M.D.; C. A. H. de Szigethy, M.D., *Committee.*

January 17, 1882.

ʼΑσκληπιὸς ʽο Σωτὴρ

Χαρμα μέγ' ανθρωποισι, κακων θελκτῆρ' οδυναων.

Hymns of Homer, No. XVI.

PROLIFERATIONS.

——The Sixth Volume of the Proceedings is completed with this issue. A glance over the Index will show that the work of the Society for 1881 has in no way fallen behind its preceding record. The character of the Papers presented to the Society during the past six years has clearly justified the establishment of the Proceedings as the Society's publication.

With the new volume the Proceedings enters upon a broader and more dignified career. It is to be eminently the Society's Journal.

As will be seen by the minutes of the Annual Meeting, the Society, in making good its previous guarantee, relieves the Proceedings from all dependence on advertisements. Only the 2d, 3d and 4th pages of the Cover will be sold for business purposes. The distribution of the Proceedings will be the same in promptness and extent that it has had for the past six years, thus furnishing to the scientific work of the Society immediate and extensive circulation where it will be best appreciated.

It is a matter of great gratification to the Members of the Council, who have labored to secure the permanence of the PROCEEDINGS, to be assured that their efforts have not been misspent, and that the security and the continuance of the Society's journal by the Society itself rests on the zeal, dignity, good feeling and public spirit that are so eminently characteristic of the medical men in this city.

——A NEW JOURNAL is to make its appearance on the first of February, in which one of the members of our Society is interested. It is the Journal of Psychiatry and Neurology. Its editors are Dr. T. A. McBride, of New York, L. C. Gray, of Brooklyn, and E. C. Spitzka, of New York. The former quarterly journal of our friends, the Neurologists, was published in Chicago, by Dr. Jewell, but it has been sold out, and the new journal is intended to take its place.

——AN EX-PRESIDENT and highly-valued member of this Society, has been inconvenienced in no small measure by the reckless imputations that have been allowed to find their way into the secular press, in connection with the wholesale puffery of an article which, of all others in the world, he would be the least likely to endorse. The only redress practicable, under the circumstances, appears to be in a thorough knowledge, by his professional *confrères*, of the peculiar annoyances which he has been patiently enduring for a long time.

TO THE EDITOR OF THE PROCEEDINGS:

For more than a year past, the daily papers of Brooklyn have contained the advertisement of so-called "Magnetic Garments," for the cure of disease, with numerous letters addressed to "Dr. Thayer," who figured as an agent for their sale.

I have been forced to bear the annoyance of being supposed by many who were not personally acquainted with me, to be the person referred to in these communications. I have been forced to bear it in silence rather than take the imprudent step of appealing to the public through the newspapers. But hearing lately that even in the medical profession, some men to whom I am a stranger have supposed me to be the person referred to, I have thought it best to set myself right with all the readers of the PROCEEDINGS, by saying (which is needless to any gentleman who knows me) that the name of DR. THAYER, used in these advertisements, does not refer to me.

WM. HENRY THAYER, M.D.,
171 Livingston Street.

January 17, 1882.

——DR. J. H. KIDDER, of the Experimental Laboratory of the Navy Department, Washington, and formerly an esteemed member of this Society, has presented this Society with a selected series of photomicrographs of atmospheric dust in that city, as well as some showing the blood in the disease known as "beri-beri," from cases that occurred at the Naval Hospital at this city. A descriptive note accompanies the photographs, which will be placed at our Reading-Room for the use of the members. Dr. Kidder is now examining the blood of scarlet fever, and reports that it resembles closely the blood of yellow fever, as photographed by Surgeon Sternberg, at Havana. This thoughtful attention of Dr. K. is highly appreciated.

——Contributors to Library Fund, 1881.—Andrews, J. S.; Armor, S. G.; Atkinson, G. A.; Ayres, Benj.; Ball, John; Barber, J. H.; Bodkin, D. G.; Bowron, F. W.; Briggs, B. M.; Brown, Annie W.; Brodie, J. A.; Brush, G. W.; Bunker, E. S.; Burge, J. H. H.; Chapman, E. N.; Childs, S. B.; Clarke, A. S.; Cochran, A.; Colton, F. H.; Conkling, J. T.; Conroy, W. E.; Cooper, John; Corbin, Job; Coverly, J. H.; Crutchley, W. F.; Cushing, G. W.; De La Vergne, C. F.; Dower, A. J.; Drury, Geo.; Edson, Benj.; Emery, Z. T.; Ensell, J. E.; Evans, G. A.; Fowler, G. R.; Freeman, J. N.; French, T. R.; Gilfillan, W. J.; Gray, L. C.; Griffiths, W. E.; Griggs, S. C.; Hopkins, G. G.; Hunt, J. H.; Hutchison, J. C.; Jewett, Charles; Johnson, J. G.; King, J. S.; Kretzschmar, P. H.; Kuhn, G. R.; Little, W. A.; Lowenstein, H.; Madden, F.; Mason, L. D.; Matheson, A. R.; Mathewson, A.; McLean, H. C.; McNaughton, G.; Merritt, John; Metcalf, E. G; Mordough, E. F.; Ormiston, Robt.; Ostrander, H. V.; Ostrander, J. W.; Paine, A. R.; Palmer, Ernest; Peck, A. E.; Pilcher, L. S.; Pratt, W. H. B.; Quinn, J. R.; Randolph, W. H.; Reynolds, E.; Richardson, J. E.; Risch, H. F. W.; Rockwell, F. W.; Rooney, A.; Rushmore, J. D.; Russell, W. G.; Shaw, J. C.; Shepard, A. W.; Stuart, F. H.; Stone, R. H.; Smith; W. S.; Sullivan, J. D.; Swalm, W. F., Sweeney, J.; Szigethy, C. A. H.; Terhune, J. J.; Thayer, W. H.; Vanderveer, J. R.; Van Ness, J.; Van Zile, B. S.; Wackerhagen, G.; Wallace, W.; Walker, Jerome; Westbrook, B. F.; White, H. B.; Wiebur, Geo.; Wight, J. S.; Wilde, T.; Williams, H. F.; Wunderlich, F. W.; Woodhull, K. C.; Wyckoff, R. M.; Zabriskie, J. L.

——In this great city, "To-day a stranger, if taken with a contagious disease, must *die on the street or break the law* : it is unlawful for him to take a public conveyance, and every hospital in the city is obliged by law to close its doors against him." So says *The Pathologist* for January. Is it not about time that this state of things should come to an end? If the public authorities continue to neglect the crying need that exists for an infectious disease hospital, will not some liberal-minded private citizen of wealth take it to heart and win for himself an undying name in this community? To-day, I may be a gentleman, and to-morrow a pariah, if I shall have been taken with a fever, in the eye of the law and the charities. It has been proposed by an English writer, that every person convicted of a crime shall be sent to a reformatory of refinement, but that every one who is so culpable as to contract contagious disease shall be sent to jail *instanter*. This may seem harsh toward the sick man, but there is not even jail accommodation in Brooklyn for visitors and some citizens who may be suddenly taken down with an eruptive fever. This question must be continuously agitated until a means of relief is found.

——Infectious Disease at Edinburgh.—Dr. James A. Russell writes: "I may say that our practical light at present as to the means of preventing the spread of infectious diseases is as follows—*to avoid filth and to isolate disease.* That comprises the whole practice of the matter. How are we to isolate disease? I may be asked. In Edinburgh the Corporation has recently provided a fever hospital for that purpose, but it is most disappointing to find how little interest the public take in such a step forward, and how little they seem to care about it. We have in this hospital at present the means of affording the poorer classes a ready escape from the dangers of treating these diseases at home. An instance recently came under my notice that shows these dangers. One of the children in a family took scarlet fever. The parents were urged to send off the child to the fever hospital for the sake of protecting the other members of the family and the other inhabitants of the common stair. They declined to do so, because, as they said, the other members of the family had had it already, and therefore they supposed there was no danger to their household, and, as for their neighbors, they might look out for themselves. Now, all their neighbors—wonderful to relate—escaped. But another of their own children took the fever a second time, and died. I hope we will have this hospital so arranged as not only to afford relief to the poor, but also to give adequate accommodation for all classes of society.—*Glasgow Sanitary Journal*, Jan.

——THE WATER OF A HOLY WELL.—Prof. Frankland has recently sent a letter to the London *Times* on the quality of a well regarded as sacred by Mohammedan pilgrims. The water appears to be even worse than that of many wells not considered sacred, but we hope our readers will take warning from this extreme instance of well pollution, and consider that it does not require contamination seven times worse than sewage to send typhoid and cholera into the houses of Christians, however it may be with Mohammedans.

Prof. Frankland says: "The well is in Mecca; the water is regarded as holy, and large quantities are annually sent as gifts to all Mussulman countries. Most of the Mohammedan princes, especially those of India, have 'keepers of the well,' whose duty it is to send them annually water from the well.

"I have analyzed this water, and find it to be of the most abominable character. In fact, it is sewage more than seven times as concentrated as London sewage, and contains no less than 579 grains of solid matter per gallon. Knowing the composition of this water, and the mode of propagation of Asiatic cholera by excrementitious matters, it is not to be wondered at that outbreaks of this disease should often occur among pilgrims to Mecca, while it would scarcely be possible to provide a more effective means for the distribution of cholera poison throughout Mohammedan countries."

——The Regular Monthly Meetings of the Medical Society of the County of Kings are held at 8 P. M. on the third Tuesday of each month, at Everett Hall, 398 Fulton Street.

The February meeting will be held on the 21st, at which the following paper will be presented :

A Critique upon the so-called Virus of the Chancroid, by Dr. F. R. Sturgis, Prest. of the Med. Soc. of the County of New York.

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THE SURGICAL USES OF WIRE-CLOTH.

BY J. S. WIGHT, M.D.

Wire-cloth is made of wire, as any other cloth is made of thread. Wire-cloth suitable for surgical uses is made of wire from one-twentieth to one-tenth of an inch in diameter; the meshes are from three-tenths to five-tenths of an inch square, or the length of the mesh may be greater than the width. After the cloth is cleaned with acid, it is put into melted zinc, which covers the wires and fastens them quite firmly together where they cross each other, making a firm and strong structure.

About the year 1870 I began to put wire-cloth to surgical uses. Since that time I have used wire-cloth quite constantly, and have noted that other surgeons have used it. And the more I use it the more valuable it seems to be to meet certain indications, to be mentioned as we go on. In passing, I may mention that the use of wire-cloth in surgery is not new; but the kind of wire-cloth I have described is somewhat new as employed in surgery, and, as far as I know, was first introduced to the profession by myself.

In the first place, wire-cloth can be cut into any desired shape by a pair of shears for cutting tin. The separate wires may be cut out by a pair of so-called French pliers. The pieces of wire-cloth may be bent into any required form by the hands of the surgeon; and, when bent, it will generally have enough firmness and resistance to keep its form under all ordinary circumstances.

Wire-cloth is very light—having the same extent of surface, it is lighter than wood, tin, zinc, or binder's board, used for splints. I have verified this statement by experiment.

Wire-cloth is porous, or, rather, it is full of holes, and ventilates the part to which it is applied better than any other splint material. It is very desirable where irrigation is needed; and it does not absorb moisture. At any time it can be removed, disinfected, and re-applied with facility. These are very superior advantages.

Wire-cloth generally has sufficient firmness to keep reduced bony fragments in place; but if need be, it may be fastened to light strips of wood by small staples, in order to make it firmer.

Strips of wire-cloth may be used to strengthen plaster-of-paris, when used for the spinal jacket, or for fractures, simple or compound. An admirable use of wire-cloth is in fenestrating a plaster-of-paris splint in a case of compound fracture; for it enables the surgeon to make a light and firm splint: having the firmness about the fenestrum, where it is much needed. And a piece of wire-cloth makes an excellent trap-door to cover the fenestrum, into which a piece of oakum can be put, making gentle pressure on the soft parts. I can recommend a splint in which plaster-of-paris and wire-cloth are combined.

Wire-cloth may be hinged on a board splint, as you see in this specimen, for treating a severe wound of the fore-arm—especially when there has been a compound fracture of one or both bones. This is an excellent appliance for keeping bony fragments in place, and for holding oakum, which acts both as a pad for the splint and as an absorbing material for the waste products of the wound. The wire-trough can swing as a door on its hinges, permitting the wound to be dressed, while leaving the fore-arm on the board splint, and can then readily swing back into place. In the meantime the bony fragments need not be disturbed. I can testify to the great advantage of this appliance by its use in the treatment of several cases of severe injury to the fore-arm.

Wire-cloth may be made into buckles of various sizes by cutting out part of the wires of some of the meshes and leaving the rest of the wires for tongues, which, cut obliquely, can penetrate a bandage and fasten it evenly and firmly around retentive splints. Here is a buckle, and I show you the method of using it. The bandage can be made loose or tight, as the case requires. These buckles are inexpensive, and prevent the objectionable results coming from knots tied in bandages.

A retentive buckle, to be applied to the top of the head, in case of fracture of the lower jaw, may be made of wire-cloth. The retentive buckle extends from the upper border of the forehead to the occipital protuberance, and has three sets of tongues on each side—one in the middle and one at each end. The middle of a six-tailed bandage is applied to a sub-mental splint: (1.) The posterior tails of the bandage are brought forward to and held by the anterior tongues of the retentive buckle. (2.) The middle tails of the bandage are carried upward to and held by the middle tongues of the retentive buckle. (3.) The anterior tails of the bandage are carried backward to and held by the posterior tongues of the retentive buckle. In several cases of fracture of the lower jaw treated by me the retentive buckle has met the indications in an admirable manner.

The sub-mental splint may be made of wire-cloth by simply cutting a small quadrangular piece, as one makes a four-tailed bandage, and then bending it into proper shape with the hands. This sub-mental splint is especially adapted to the treatment of a compound fracture of the lower jaw, because it can be kept in an antiseptic condition.

Cut a piece of wire-cloth so that it will have a length about three inches greater than the arm, and a width somewhat greater than the semi-circumference of the arm. Cut out the two middle meshes of one end for about three inches, and then bring the two tongues together, overlapping them and tying them with a strong twine, so that they will meet the rest of the piece at an angle equal the angle at the shoulder to which it is to be applied. The result will be an arm-splint having a shoulder-cap that can be fastened on the shoulder by a bandage passing under the axilla and over the shoulder-cap, which is padded and rests on the shoulder. This splint can be used for treating fractures of the humerus. However, a piece of board fastened to its distal end for supporting and keeping the fore-arm quiet, and preventing motion of the bony fragments, is a useful addition. By means of the piece on the fore-arm and the shoulder-cap, it is possible to make considerable extension on the lower fragment of the broken humerus.

I know of nothing better or more convenient than wire-cloth for making double-angled splints for treating fractures of the condyloid end of the humerus in children. The double-angled splint has two angles: one angle is generally a right angle, made by the meeting of the long axes of the arm-piece and the fore-arm-piece of the splint. The other angle is generally one of 135 degrees, made by the meeting of the long axis of the arm and the transverse axis of the plane of the fore-arm.

The anatomical basis for this splint needs some attention: Put the arm by the side, in an easy position, and flex the fore-arm till it meets the arm at a right angle. The right angle of the splint conforms to the right angle at the elbow. Put the bones of the fore-arm in the same plane, which will be nearly perpendicular. The transverse axis of the fore-arm will meet the long axis of the arm at an angle of about 135 degrees. The oblique angle of the splint will correspond to the oblique angle of the arm and the plane of the fore-arm.

Here is a small double-angled splint, made of wire-cloth. At first it is cut, so that the arm-piece and the fore-arm-piece meet at a right angle; and then it is bent at the elbow, so that there is an oblique angle made by the plane of the fore-arm-piece and the arm-piece. Here is a large double-angled splint, made of wire-cloth and a piece of pine board. The piece of pine board is applied to the dorsum of the fore-arm, and the piece of wire-cloth is applied to the outside of the arm. This splint is made for an adult. The small splint is strong enough for a child, when made only of wire-cloth.

Some of the advantages of the double-angled splint may be mentioned in this connection. In a case of fracture of one or both bones of the fore-arm, this splint will keep the fragments in the same plane, the fore-arm being in a state of mid-rotation, so that if there be anchylosis of the radio-ulnar joint the fore-arm will be in the most useful position. It will be seen, also, that the fragments of bone in general will be kept further apart, so that the radius and ulna will not be so apt to unite with a bony bridge. And for reasons that may not be detailed now, the muscles are put more completely at rest—especially the supinator longus—which can be shown to be a powerful flexor of the fore-arm, and as much a pronator as supinator.

In a case of fracture of one or both condyles of the humerus, or in case of a supracondyloid fracture of the humerus, the double-angled splint will meet two important indications: (1.) By putting a shoulder-cap on the arm-piece of the splint it is possible to make extension on the fore-arm and counter-extension on the axilla. (2.) By putting the fore-arm in a normal relation to the arm, the distal fragment will not be so apt to tilt from its normal relation to the proximal fragment. The effect will be a tendency to prevent undue angular displacement of the distal fragment.

Also, in a case of dislocation of the fore-arm, or of sprain of the elbow-joint, the double-angled splint, after reduction of the dislocation, is well adapted to keep the bones in their normal relation as well as put the muscles that span the injured joint in a state of repose. The relief expressed by a patient on the application of this splint, and the rapid recovery that follows, outside of anatomical and theoretical grounds, has favorably impressed those who have seen it used. A proper degree of pressure can be made by the wire-cloth, and any lotion that is desirable can be applied to the injured part, while the splint can be removed at any time to permit passive motion.

I have used the wire-cloth in making an anterior suspension splint for the lower limb, when there has been a compound fracture of the shaft of the femur; and, so far as I can judge at present, it is entirely competent for such work, and the angles for the groin, the knee, and the ankle can be easily made by bending the cloth with the hands.

In a case of injury to the foot or ankle, or in a case of resection of the ankle joint, a piece of wire-cloth, having a leg-piece and a foot-piece meeting at a proper angle, has done good service, not only when moist dressings, but also when dry dressings were applied. The form of this foot-and-leg splint is best when based on anatomical relations, and need not detain us now.

It has not been my intention to enumerate all the surgical uses of wire-cloth. My intention has been to draw attention to the usefulness of wire-cloth in surgery. I have not intended to make wire-cloth a hobby. I have endeavored to let this material vindicate its own place in the field of surgery, and it seems to me that it has done this. What I desire is to make the usefulness of wire-cloth more widely known. Wire-cloth is a good thing—both for the surgeon and for the patient.

For the purpose of illustration, permit me to exhibit to you a man who has on his person the following surgical appliances made of wire-cloth: (1.) A retentive buckle on the top of the head. See how well it keeps its place; there is nothing better. (2.) A sub-mental splint, as good as one of any other material, and more readily made. (3.) A shoulder-cap of simple construction and practical utility. (4.) A double-angled splint, which fits the anatomical relations, and keeps from slipping off the cone of the fore-arm.

WIGHT'S ARTERY FORCEPS AND NEEDLE FORCEPS.

BY J. S. WIGHT, M.D.

Permit me to call attention to two pairs of forceps: one an artery forceps, and the other a needle forceps.

I invented the *artery forceps* in 1872, for the purpose of taking hold of meningeal arteries when required during resection of the cranial bones. The curve in this instrument is adapted to this work, in which I have used it several times. The length of the instrument is four and three-fourths inches. The jaws are curved, and have a length of about an inch and a half. The jaws are perforated near the ends, so as to introduce a ligature for arteries or tumors. I use this instrument constantly to arrest hemorrhage during operations, especially during operations on the head. When the operation is done the artery forceps is removed and generally the hemorrhage does not recur. I have used it in ligating arteries in the continuity, and in ligating arteries during all kinds of amputations. The curve of the instrument will seize a considerable extent of bleeding surface and arrest the flow of blood. This pair of forceps I consider a valuable adjunct to the ordinary artery forceps. It has a spring catch and a pivotal pin, which has enabled me to use it as a handle to the chain-saw, so that I have dispensed with the usual handles.

I invented the *needle forceps* in 1873, as none of the needle forceps in use exactly suited me. This instrument is about five inches in length, having straight jaws about an inch and a half in length. On the inside of the handle rings it has a catch, that can be easily operated with one hand. The arms of the handles are somewhat elastic, but yet enable the jaws to grasp the needle firmly. I have pushed a pin through a half-inch pine board with this instrument. I have used the needle forceps for the avulsion of ingrowing nails and removing pieces of necrosed bone. One of the most important uses of this instrument is the arrest of hemorrhage. In 1874 I suggested the use of the needle forceps for the arrest of bleeding from the axilla in a case of my colleague, Dr. Skene. The doctor was removing a large tumor from the breast and axilla, and had a gush of blood from the axilla, with extreme difficulty of ligation. My needle forceps were applied to the bleeding vessels, and left in place for thirty hours, and then removed, when bleeding did not recur. The doctor tells me he has often repeated this experiment. Since that time I have used the needle forceps for hemostasis. I have also used the needle forceps for crushing the ends of arteries of the scalp, in case of failure of other means. I have used this instrument for crushing the veins in some cases of piles, and had a most desirable result follow.

These instruments are made by Tieman & Co., 67 Chatham Street, New York. Fig. 1 represents the artery forceps. Fig. 2 represents the

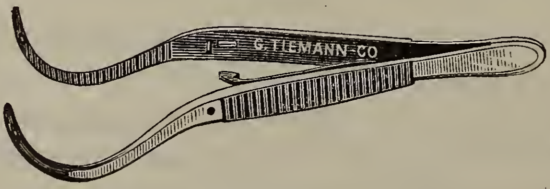

FIG. 1.

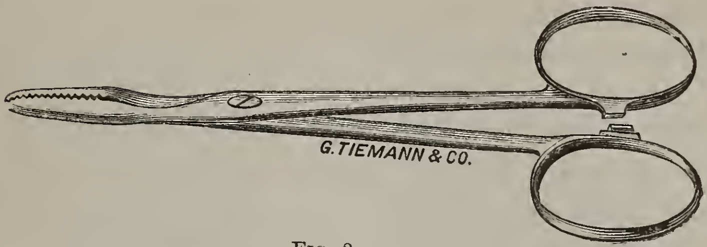

FIG. 2.

needle forceps and hemostat. I would long ago have published descriptions of these instruments, but have waited till experience has fully demonstrated their uses, some of which I have pointed out. They will shorten operations and prevent loss of blood, and thus be the means of saving life.

NOTE ON THE USE OF POTASSIUM IODIDE IN THE TREATMENT OF ANEURISM.

BY B. F. WESTBROOK, M.D.

CASE I.—On the 5th of September, 1877, John Hattlow, a Scotchman, 44 years old, presented himself at my class in the outdoor department of the Long Island College Hospital. He was a sailor, engaged upon a lighter in the harbor. Twenty-five years before, while in China, he had had a venereal sore, which was accompanied by several suppurating buboes. He gave no history of secondary syphilis, but stated that his wife had had some symptoms which seemed to indicate a syphilitic taint. For several months he had been troubled with a cough, without much expectoration, and almost complete aphony.

A careful examination of the chest revealed no abnormality, except a roaring in the trachea during inspiration.

His throat was examined by my colleague, Dr. Thos. R. French, who found an incomplete paralysis of the left vocal cord. A complete diagnosis could not be made, owing to the lack of symptoms; but, on the supposition that some syphilitic deposit was the source of the difficulty, he was put upon the potassium iodide, in twenty grain doses three times a day. This treatment was continued until the 8th of Nov.; and during the two months the improvement in the voice and the amelioration of the cough were both very marked; so much so that we were sanguine as to his ultimate recovery. On the latter date, however, though the improvement in the voice continued, he said that he had taken a bad cold, and that his cough was increased. He was put upon the treatment recommended by Dr. Prout, viz.: ℨss. of the tinct. ferri. chlor. every three hours. A few days afterwards I was called upon, in my capacity of Pathologist to the Hospital, to make a post-mortem examination upon the body of a man who had been brought to the Hospital the day before from a boat lying at one of the Brooklyn wharves. He had been seized with a violent cough, great pain in the chest and urgent dyspnæa.

The boat was at the time lying upon the Hoboken shore, but it was towed to Brooklyn on the day of his admission, and the ambulance was sent for. The ambulance surgeon, Dr. Mordough, found flatness upon percussion over the lower half of the thorax on both sides; dullness on the upper half of the left side, with bronchial breathing and a loud systolic bruit. The dyspnæa was so great that death seemed imminent. He was removed to the Hospital, where he died of apnæa within a few hours after his admission. It proved to be the body of my aphonic patient. The pleural cavities were both about half filled with clear serum, with a very slight amount of fibrin upon the pleural surfaces; the appearance of hydro-thorax rather than of an inflammatory exudation. The lower half of the left lung was hepatized, its upper portion œdematous. The right lung was congested and œdematous. The heart was normal. An aneurismal sac projected from the inferior aspect of the arch of the aorta, pressing upon the auricles and upon the pulmonary arteries and veins. The left recurrent laryngeal nerve was stretched around it, the bundles of nerve fibres being somewhat separated, so as to produce a flattening of the trunk. The dilatation was not confined to the inferior side of the arch, but was somewhat fusiform in character; but the bulging was very prominent below. The walls of the artery were thick, pliable, without calcareous plates, though there was some deposit of lime salts, and had a fibrous consistence, with very little elasticity. There were no coagula in the sac. It appeared as if it might have continued to resist the internal pressure for an indefinite period of time, had no acute disturbance of the vascular equilibrium occurred.

No evidences of syphilis were found elsewhere.

Case II.—Wm. Hayes, æt. 28, native of the United States, a glass-blower by trade, came to the Dispensary Dec. 15th, 1879. He was a tall, muscular man, but had been in the habit of drinking a great deal. He had had a slight cough for about a year, but for the past ten or twelve weeks it had been very severe, spasmodic in character, and accompanied by a slight frothy expectoration.

As the cough increased in violence it was accompanied by pain in the right side of the thorax, extending to the shoulder and scapular region. The pain had became very intense, and was constant, being greatly aggravated by the cough. Any sudden effort, as sneezing, gave rise to the most acute darting pain through the shoulder and neck.

There was also a feeling as if the shoulder were constantly dragged forward. He was unable to lie in any other position than upon the right side. He was, of course, totally incapacitated for work. There were, in addition to the above symptoms, dyspnæa and cardiac palpitation. The man was anæmic; the lips cyanotic, and the surface everywhere mottled and more or less livid, indicating a feeble capillary circulation.

The shoulders were rounded, perhaps from his employment. There was a slight prominence on the right side, extending from the clavicle to the third intercostal space, and percussion over this area gave a dull sound.

There was also a strong systolic pulsation of this region.

The apex beat was in the fifth interspace, directly under the left nipple. The respiratory murmur was absent at the upper part of the right thorax, and under the sternal end of the right clavicle there was a very indistinct to-and-fro sound. In the lower portion of the right lung there was a loud roar produced by strong inspiration. The heart sounds were feeble. The pulse was soft and small, without any manifest difference on the two sides.

The voice was husky from the strain of the violent cough. The pupils had about the normal appearance. He was instructed to lie in bed all the time, to stop the use of alcoholic drinks, and to take his ordinary diet, with as little fluid as possible. In addition to this he was given the potassium iodide, gr. x., every three hours.

On Dec. 17th, two days after his first visit, he returned and reported that he had not quite so much pain in his shoulder. Jan. 5th. The cough had ceased (?), the palpitation had lessened, and the pain was only slight. Jan. 12th. The report was about the same; the dose changed to gr. xv., four times daily. Jan. 19th. Coughing very little, and it was quite loose. Very little pain either on coughing or sneezing. He was able to lie upon either side. Appetite good; bowels moving once or twice daily. He said that he had not tasted water for three weeks; that he took one glass of ale or beer once in two or three days, a bowl of tea or coffee with each meal, and not even this when he had soup. He was not so cyanotic as formerly, though the day was warmer. The iodide increased to gr. xx., four times daily.

Feb. 6th. Had been four days without any medicine. He feels well, but has a return of the pain in the shoulder. Treatment as before. Feb. 16th. Feeling well; voice much improved. He had a little pain in the sternal and upper dorsal regions. He was still anæmic. Stopped the potassium iodide and ordered syr. ferri. iod., half a teaspoonful three times daily. Feb. 23d. The pain had diminished. The bulging of the thoracic wall was less, and the pulsation not as well marked as formerly.

The iron continued, with the addition of gr. iv. of the iodide of potassium to each dose, and to take it four times a day.

On the 25th of February he presented himself in an inebriated condition. He stated that he had caught cold and, as the cough had returned, he had taken some whisky to relieve it. I learned, however, that he had attended the funeral of a friend, and had manifested his respect for the departed by getting very drunk. Returned to the iodide, combined with the hydrate of chloral, but it failed to have much effect, and he became very sick. The debauch resulted in an attack of acute bronchitis, extending into tubes of small calibre. The cough and dyspnæa were terrible, the pain returned, and the pulsation under the right clavicle was very forcible. Accompanying this, he had a high fever, with foul yellow tongue and copious sweating. The fever was, probably, in part of malarial origin, as he lives in a highly malarious district.

By the energetic use of counter irritation, the free administration of quinine and a cough mixture of morphia, aromatic spirits of ammonia, and spirits of chloroform, he was finally restored, and again put upon the potassium iodide.

A continual improvement was observed up till May, when, in consequence of carelessness and drinking, he had another relapse with bronchitis and fever. Previous to this he had been without his medicine for a short time. The same treatment that had been employed before was again effectual in breaking up his acute attack, and he was put upon the iodide, and cautioned not to drink any more. After this I lost sight of him, and saw nothing more of him till a few days ago. During the summer he went to Montreal and worked at his old trade of glassblowing for two months, but it was too much for him, and he returned to Brooklyn. He has now been working for about one month in his old situation. But he does not blow now, and I am told that his present employment is easier, although it involves considerable strain upon the muscles of the upper extremities. He has not kept his promise not to drink any more, though he is more moderate than formerly. The only change in his condition is that the apex of the heart has descended, and is felt in the mammillary line, beating behind the sixth rib.

He has been advised to continue the iodide in ten grain doses three times daily, and has consented to do so.

From the observation of these two cases, and of others of which I have not sufficient notes to warrant their publication, together with the cases already reported by other observers, I am led to believe that the potassium iodide is a remedy of the greatest value in the treatment of aneurism of the vessels of the trunk, when surgical means are not available. Though the cases in which it will be possible to say that a cure has resulted must necessarily be few, still the great relief from pain and the prolongation of life, which may be obtained by the use of this drug, justify us in regarding these results as one of the brilliant achievements of therapeutics. Dr. Balfour, who has used it more extensively than any other clinical observer, says that he has had "unvarying success, so far as relief to symptoms is concerned,"* and, in some instances, its employment has been followed by a cure. The way in which these happy results are brought about is not known.

I am inclined to adopt the view of Dr. Hayden, who attributes the subsidence of the symptoms to a reduction of the vascular pressure.† This is illustrated by my first case in which the paralysis of the vocal cord was evidently caused by paralysis of the recurrent laryngeal nerve from pressure and stretching on the dilated aorta. The relief of the symptoms, which followed upon the administration of the remedy, could only have been brought about by a diminution of the pressure and stretching of the nerve, and it seems more reasonable to attribute that diminution to a relaxation of the vessels, such as we know is produced by the potassium compounds, than to suppose that the aorta contracted in some mysterious manner. It is also known that the local diminution of pressure, by abstraction of blood from the neighborhood of an aneurismal tumor, will relieve the intense pain and other symptoms temporarily.‡

But, in addition to the immediate result obtained, we must, I think, credit a considerable portion of the benefit derived from this agent to the slow alterative action which it exerts upon the coats of the blood vessels, else we can hardly account for such changes in their anatomy as were observed by Balfour and others. That the potassium iodide has this effect in cases, not only of syphilitic disease, but of changed structure from other causes, can scarcely be doubted, though no positive demonstration has as yet been made. Its action upon the other connective tissue structures is so well established that I think we are justified in assuming, for the present, that it may also materially influence the nutrition of the coats of the vessels through which it passes.

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* G. W. Balfour. Clinical Lectures on Diseases of the Heart and Aorta. Philadelphia: Lindsay and Blakiston, 1876, p. 374.

† Thomas Hayden. The Diseases of the Heart and of the Aorta. Philadelphia: Lindsay and Blakiston, 1875.

‡ Stokes. The Diseases of the Heart and the Aorta. Philadelphia: Lindsay and Blakiston, 1855, p. 610.

NOTE ON THE USE OF "THE LADIES' NEW SANITARY TOWEL."

F. H. STUART, M.D.

A short time ago I sent to Messrs. Millikin & Down, Instrument Makers, of London, for a sample of the "Ladies' New Sanitary Towel," of which they are the wholesale agents. This I present here for your inspection. It is prepared from absorbent cotton covered with soft gauze, and this is stitched to a piece of bandage. It is intended as a substitute for the ordinary napkin used during menstruation and in the lying-in room. When soiled it is to be burned; thus at once disposing of what is disagreeable in many ways, aside from the possible dangers to health from septic germs imprisoned and developing whilst being kept for the laundry.

It is hardly necessary for me to dwell upon the various advantages of such "towels," yet I will refer to a few of them:

I. The roll of cotton is elastic, and with the delicate gauze and soft bandage must be very much more comfortable to wear than the material in ordinary use.

II. The cotton is said to be so treated as to render it antiseptic as well as absorbent. It cannot be questioned that in this respect it supplies a *desideratum*. This is particularly the case when used in the lying-in room. *It is often of as much importance for the lochia to be disinfected as fast as discharged, as that the alvine dejections in typhoid fever should be so treated.* Antiseptic midwifery and antiseptic gynæcology (except in ovariotomy), are yet in their infancy. It seems to me that such a device as this, made as perfectly as our present knowledge of antiseptic agents demands, is a long advance step toward preventing the diffusion of the puerperal septic germs. What the agent here used is I do not know. It was my intention to make an analysis of some of the cotton. I, however, noticed that the cotton used is not so readily absorbent as that prepared in this country. Should some one of enterprise arrange for the manufacture of them here I should say that the best antiseptic for the purpose is boracic acid. This is preferable to salicylic acid, in that it is as unirritating, and yet is not volatile, as is the latter. Mr. MacCormak, in his work upon Antiseptic Surgery, states, on the authority of Wiebel, Chemist in the State Laboratory of Hamburg, that salicylic wool "often contains only one-fourth of the designated quantity of acid." He (Wiebel) considers that this is not so much the result of shaking out of the crystals, as the use of warm water solutions for the impregnation of the wool; as much as half the acid being sometimes driven off by the heat employed. (P. 129).

III. I have alluded to the fact that these towels are designed to be destroyed as soon as used. This point will be appreciated more by those who have use for them, than perhaps we can understand. Twelve or thirteen times during every year of the whole child-bearing epoch, every woman wishes for an escape almost from herself. Such a device, I predict, will be welcomed as a great addition to her comfort, convenience, and possibly, her health. In travel and visiting they will be especially convenient.

IV. As regards the cost compared with the expense of washing, it is scarcely more than is paid for washing the towels now used.

They are sold at three shillings a dozen, or at a slight reduction from this price when taken in packages of six dozen.

BROOKLYN TRAINING SCHOOL CONNECTED WITH THE CITY HOSPITAL.

The Committee of the Training School for Nurses has made arrangements with the Authorities of the City Hospital for giving two years' training to women desirous of becoming professional nurses.

Those wishing to obtain this course of instruction must apply to the Superintendent of the Training school, 257 Adelphi Street, Brooklyn, upon whose approval they will be received into the School for one month on probation. The most acceptable age for Candidates is from twenty-five to thirty-five years. The applicants should send with answers to the paper of questions, a letter from a clergyman, testifying to their good moral character, and from a physician, stating that they are in sound health. Applicants are received at any time during the year when there is a vacancy. During the month of trial, and previous to obtaining a position in the School, the applicant will be examined in reading, penmanship, simple arithmetic, and English dictation.

The Superintendent has full power to decide as to their fitness for the work, and the propriety of retaining or dismissing them at the end of the month of trial. She can also, with the approval of the Committee, discharge them at any time in case of misconduct or inefficiency.

During the month of probation the pupils are boarded and lodged at the expense of the School, but receive no other compensation.

Those who prove satisfactory will be accepted as pupil nurses, after signing an agreement to remain two years, and to obey the rules of the School and Hospital. They will reside in the Home, and serve for the first year as assistants in the wards of the City Hospital; the second year they will be expected to perform any duty assigned them by the Superintendent, either to act as nurses in the Hospitals, or to be sent to private cases among the rich or poor.

The pay for the first year is $9.00 a month. For the second year $15.00 a month. This sum is allowed for the dress, text-books, and other personal expenses of the nurse, and is in no wise intended as wages, it being considered that the education given is a full equivalent for their services. They are required after the month of probation when on duty to wear the dress prescribed by the Institution, which is of blue and white seersucker, simply made, white apron and cap, and linen collar and cuffs.

The day nurses are on duty from 8 A. M. to 8 P. M., with an hour off for dinner and additional time for exercise or rest. They are also often given an afternoon during the week, and have a right to the half of Sunday. A vacation of two weeks is allowed each year. It is not proposed to place nurses on night duty until they have been in the School three months.

As the Institution is unsectarian, there are no religious services connected with it, except evening prayers, and all nurses are expected to attend the place of worship they prefer once on Sunday.

In sickness all pupils will be cared for gratuitously.

COURSE OF TRAINING.

The instruction includes:

1. The dressing of blisters, burns, sores, and wounds; the application of fomentations, poultices, cups and leeches.
2. The administration of enemas and use of catheter.
3. The management of appliances for uterine complaints.
4. The best method of friction to the body and extremities.
5. The management of helpless patients; making beds, moving, changing, giving baths in bed, preventing and dressing bed-sores, and managing positions.
6. Bandaging, making bandages and rollers, lining of splints.
7. The preparing, cooking, and serving of delicacies for the sick.

They will also be given instruction in the best practical methods of supplying fresh air, warming and ventilating sick-rooms in a proper manner, and are taught to take care of rooms and wards, in keeping all utensils perfectly clean and disinfected; to make accurate observations and reports to the physician of the state of the secretions, expectoration, pulse, skin, appetite, temperature of the body, intelligence, as delirium or stupor, breathing, sleep, condition of wounds, eruptions, formation of matter, effect of diet, or of stimulants, or of medicines; and to learn the management of convalescents.

The teaching will be given by visiting and resident physicians and surgeons at the bedside of the patients, and by the Superintendent and Head Nurses. Lectures, recitations and demonstrations will take place from time to time, and examinations at stated periods.

When the full term of two years is ended, the nurses thus trained will be at liberty to choose their own field of labor, whether in hospitals, in private families, or in district nursing among the poor. On leaving the School they will, on passing an examination, each receive a diploma signed by the Examining Board and by a Committee of the Board of Managers, which diploma must be returned each year for endorsement.

FORM OF APPLICATION.

N. B.—This side is to be filled out in the Candidate's own handwriting, and sent t the Superintendent of Training School, 257 Adelphi Street, Brooklyn.

QUESTIONS TO BE ANSWERED BY CANDIDATE

1. Name in full and present address of Candidate.
2. Are you a single woman or widow ?
3. Your present occupation or employment ?
4. Age last birthday, and date and place of birth ?
5. Height ? Weight ?
6. Where educated ?
7. Are you strong and healthy, and have you always been so ?
8. Are your sight and hearing perfect ?
9. Have you any physical defects ?
10. Have you any tendency to pulmonary complaint ?
11. If a widow, have you children ? How many ? Their ages ? How are they provided for ?
12. Where (if any) was your last situation ? How long were you in it ?
13. The names in full and addresses of two persons to be referred to ? State how long each has known you. If previously employed, one of these must be the last employer.
14. Have you read and do you clearly understand the Regulations ?

I declare the above statement to be correct.

Date. *Signed.* Candidate.

MEDICAL SOCIETY OF THE COUNTY OF KINGS.

A regular stated meeting of the Medical Society of the County of Kings was held at Everett Hall, No. 398 Fulton Street, on the evening of Tuesday, December 21st, 1880, at 8:10 o'clock, the President, Dr. Charles Jewett, in the chair.

In the absence of the Secretary, and at the request of the President, Dr. Alexander Hutchins acted as Secretary, *pro tempore.*

There were present about seventy members.

Is the absence of the Secretary and of the records, the reading of the minutes was postponed until a future occasion.

The following nominations for new members were made:

Dr. F. R. Newman, No. 110 Madison Street, proposed by Dr. A. N. Bell; Dr. A. E. Peck, No. — Lawrence Street, by Dr. Brodie; Dr. F. M. Thomas, No. — Macon Street, by Dr. W. B. Chase; Dr. F. Lucas, Coll. P. and S., 1880, No. 218 Dean Street, by E. S. Bunker.

THE PRESIDENT said that he had, by special request, changed the order of business for the evening, so as to permit Dr. Mason, of the Committee on the death of Dr. Thorne, to present an obituary notice which had been prepared.

DR. MASON, in explanation, said the report had been delayed from time to time for several reasons: first, because he had not been in good health; secondly, because he had been out of town; and, thirdly, because he had been waiting for certain facts which he had relied upon others to furnish, and which were not furnished as promptly as desired. The delay in reporting was not on account of discourtesy to the Society, but for the reasons stated.

The report was then read, as follows:

DR. JOHN SULLIVAN THORNE, who was born in the City of New York April 19th, 1807, and died at his residence in Sands Street, Brooklyn, on the 1st of September, 1880, belonged to one of the oldest families on Long Island.

The family seat, still in the possession of one of its members, has been "in the family" for nearly two centuries and a half. It came to its European proprietors by cession from its aboriginal owners, one of the Indian tribes of Long Island; and within the memory of Dr. R. V. W. Thorne, the father of the subject of this notice, a certain aged native of the Island, the representative of the tribe, called annually for the annuity which was a part of the purchase consideration of the property.

The ancestors of Dr. Thorne were distinguished for physical strength, good health, and longevity—the reward of regular and moral habits of life. The grandfather of Dr. Thorne died at 80 and his grandmother at 99 years of age. His mother lived to a good old age, and his father, Dr. R. V. W. Thorne, lived to be 93 years old, and retained his mental powers in good measure to within a few hours of his decease. He sleeps with his fathers in the old burying ground at Great Neck, in company with more than a hundred members of his family relatives. In its vicinity still stands the old mansion, renovated and regenerated by a brother of Dr. Thorne. Dr. Thorne, the subject of this sketch, graduated with honors from Union College in the class of 1826, several of whose members rose to positions of honor and responsibility. Amongst these best known to us was the Hon. John A. Lott, of this county, highly esteemed throughout the State as a just and able Judge of one of our higher courts.

In 1829 Dr. Thorne received the degree of M.D. from the New York College of Physicians and Surgeons, and forthwith commenced the practice of his profession in this city, and continued it with more or less activity until the access of the disease which resulted in his decease at the ripe age of 73 years and 4 months. Of the physicians engaged in practice in this city at the time Dr. Thorne began his professional career, two only, Drs. Hunt and Ostrander, survive.

In 1832, memorable for the first advent of that fearful plague, Asiatic Cholera, Dr. Thorne was attached to a cholera hospital, and served with faithfulness, courage, and success. Transfusion in his hands rescued several desperate cases from death, and the young doctor gained no little credit and public esteem as the result.

About 1840 Dr. T. became the physician in charge of the Roman Catholic Orphan Asylum, and continued that relation until his death.

He was attending physician to City Hospital known as the "*Adams Street Hospital*," in which he served with honor to himself and advantage to the institution; and when the present City Hospital was established, Dr. Thorne received the appointment of surgeon, and continued by re-election in connection with it for several years.

In these two institutions the Chairman of this Committee was associated with him, and bears witness, from personal observation, to his faithful, diligent, and successful discharge of the duties of the position which he occupied.

In 1876 Dr. Thorne was appointed a Councillor, and in 1879 elected a Regent of the Long Island College Hospital. In the welfare of the college and of the hospital department he took a deep interest, and devoted to them his time and services without abatement until the close of his life—the last public duty he was able to perform being the affixing his official signature to the diplomas of the last graduating class.

As a member of this Society our deceased colleague was regular in his attendance and interested in its success, and diligent in the discharge of his duties, and in 1846 became its President.

As a physician he was distinguished for sound judgment, successful treatment of his patients, and *sterling honor* in his intercourse with his fellow practitioners.

We have thus rapidly glanced over the professional life of our deceased friend. But Dr. Thorne was not restricted in his labors for the benefit of his fellow-men to the field of his profession.

He early took a deep interest in the cause of *education*, and in it labored long, with characteristic energy. He was a member of the Board of Education of this city from its formation in 1843, and resigned his membership in 1871. Thus, for more than a *quarter of a century* he worked in this most important field, filling with great acceptance the offices of Vice-President and President, to which he was repeatedly re-elected, and the chairmanship of some of the most important committees of that institution.

Dr. Thorne was a Trustee of the old *Brooklyn Female Academy*. He was also a Director of the *Packer Female Collegiate Institute* from its earliest existence, and a life member of the *Long Island Historical Society*.

In *business relations* Dr. Thorne was a Director of the Long Island Insurance Company, and of the Firemen's Trust Company, of this city; and, last in order of time, he became a Director of the "Society of Old Brooklynites."

It would have been somewhat unusual if, in our American social and civil usages and arrangements, a man so prominent, capable and active should have escaped the solicitations of the politicians of his day. And so Dr. Thorne was repeatedly urged to accept nominations for important municipal, State, and United States offices, but he uniformly declined, with a single exception, when he was chosen one of the Presidential Electors from New York, his native State.

In his *religious relations* Dr. Thorne was connected with *Old St. Ann's* Protestant Episcopal Church—having been the first person confirmed in that parish.

Thus lived amongst us a model physician, citizen, and man; modest, faithful, and influential, he pursued the even tenor of his useful and honorable life; perhaps too little appreciated by us, his compeers, and by the busy throng for whose welfare he toiled. He has gone to his rest. Let the memory of his life and labors stimulate us—especially the younger amongst us—to "*go and do likewise.*"

T. L. Mason, M.D.,
A. Otterson, M.D., *Committee.*
J. C. Halsey, M.D.

Dr. Squibb moved, and it was so ordered, that the report be accepted, placed upon the minutes, and published in the Proceedings.

The following nominations of officers for the ensuing year were made: (*See page* 396.)

The first paper was then read by Dr. Jarvis S. Wight. It is entitled "The Surgical Uses of Wire Cloth." In connection with the paper, he exhibited specimens of the cloth prepared as illustrations, and a subject with the apparatus applied. The reader also exhibited two instruments devised by him, which are fully described in the paper.

At the conclusion of the reading Dr. Burge said he had nothing to say by way of debate, except to add his testimony, from personal experience, to the efficacy of the splint material, and of the instruments which the doctor had presented.

The second paper was read by Dr. B. F. Westbrook, being "A Note on the Treatment of Aneurism with Potassium Iodide," with presentation of patient, and physical demonstration.

The Chair asked whether there was any purring of the pulse on the side on which the aneurism is situated.

Dr. Westbrook replied thatt here was not—at least he could not discover any.

Dr. Squibb said the case in the paper reminded him of a good illustration in regard to the use of potassium iodide, which occurred in the practice of Ricord, of Paris. Dr Ricord once had a case of a famous opera singer under his charge, who lost his voice from a disease, for the treatment of which he is somewhat celebrated. The singer disappeared from the opera, was absent a considerable time; then returned with his voice restored. When the singer again appeared on the stage, Ricord was in attendance, and was conspicuous by the applause which he offered. Afterwards, when asked why he applauded so vociferously, replied that he was not applauding the singer, he was applauding iodide of potassium!

The third paper of the evening was by Dr. F. H. Stuart, entitled "Note on the Ladies' New Sanitary Towel, and its Uses." The doctor exhibited a specimen of the material described.

In discussion Dr. Squibb remarked that there was one point in the paper in regard to the volatile character of salicylic acid which was questionable. That this acid volatilizes from antiseptic dressings at any ordinary temperatures, or even at the temperature of boiling water, is new, and at variance with the nature of the acid. The artificial acid which is now alone used was at first supposed by Kolbé to be fixed for all temperatures below that of decomposition. But this is now known to be a mistake, for it does sublime at temperatures of about 250° to 260° F. The passing off slowly at lower temperatures from dressings should be established by careful experiment before it can be admitted as a fact. And the writer of the paper says he merely gave the statement as he found it in the literature of his subject. If not found in salicylic acid dressings, it would seem more likely that it had never been put there, than that it had evaporated off at common temperatures.

The Society then passed to executive business.

Dr. Bodkin offered a report from the Committee in relation to the death of Dr. Ross, as follows:

Dr. William Ross was born in the autumn of 1849 in the village of Tullanee, Eglinton, County Derry, Ireland. As a pupil in the parochial school of that place he attracted much attention for his precocious talents, and mastered an excellent elementary education at a very early age. Having given promise of a brilliant future, he was sent to the Royal Academical Institution, Belfast, where he remained until he decided on entering the Queen's College, in the same city, one of the highest seats of learning under the supervision of the government in Ireland. Here he was awarded the first scholarship in ancient classics—an honor which he held against all competitors during subsequent examinations, and until he commenced to devote his attention more exclusively to subjects within the domain of modern science.

In this he became alike distinguished, and his zeal and application were only equaled by the scholarly devotion with which he had previously pursued his studies in Greek and Latin literature.

He graduated as Bachelor of Arts, with first honors in analytical chemistry and natural science, in 1871, and received the Master's degree with similar distinction the year following.

Having now arrived at that most important period in his existence when by a single step the whole future of his life was to be determined, his broad scholarly acquirements entitling him to a choice for his sphere of usefulness among men, he selected the profession of medicine and applied himself with the same ambition to excel as in his academical studies. He received the degree of M.D. and Master of Surgery from the Queen's University, Dublin, in 1873, and in October, 1874, emigrated to this country. He established himself in Brooklyn, where he continued to reside until the commencement of his fatal illness. In March, 1880, he contracted an attack of pleuro-pneumonia, from which he rallied only for a short time. He returned to his home in Ireland in May of the present year, where he died of phthisis on November 2d, at the residence of his mother in Eglinton, County Derry.

In physique Dr. Ross was a noble specimen of manhood, measuring over six feet one inch in height. He had a magnificently formed head and was considered handsome. His manners were refined, and his language elegant and fascinating. He was witty, but not incisive, and sarcasm found no place in his generous nature. Indeed, it may be said of him that his faculty of wit was like the diamond of his country—bright and sparkling, but not cutting. He was an excellent mimic, with an endless fund of anecdotes continually reinforced by an accurate memory.

He was well versed in French literature, which he read in the vernacular, and spoke German with tolerable fluency.

He loved our city of Brooklyn, and intended making it his permanent residence. In a letter to a professional friend during the long hours of his wasting sickness in Ireland, he wrote: "As the hart pants for water-brooks, so longs my soul to re-visit Brooklyn." But his desire was not fulfilled. He sank lower day by day with this Land of Promise ever before his mental vision, for he was full of hope, and it lasted to the end. Regretted by his patients, loved by his friends, esteemed and respected by all, his spirit passed away to that good place above, where he was taught none but the good could enter—a reward for which a stainless morality, a reputation radiant with all the virtues expected in the character of the good physician had fully prepared him, our late associate, William Ross.

D. G. Bodkin, M.D.,
J. Griffin, M.D.,
J. S. Young, M.D.
} *Committee.*

DR. SQUIBB moved that the report be accepted, placed on record and published in the PROCEEDINGS; and it was so ordered.

THE PRESIDENT remarked that the Society had learned with great regret of the death of Dr. W. F. Sanford since the last meeting. In his death the Society had met with a great and sad loss. Shortly after his decease the Chair had received the usual request to call a special meeting, to take proper action, but that course was, upon consultation, postponed, until the present time. It was in order, therefore, to take appropriate action.

DR. J. H. HUNT called attention to a note, which he had received from Dr. Valentine, and which he read as follows: "The officers and members of the Kings County Medical Society are invited to attend a memorial service of the late Dr. Wilbur F. Sanford, at the M. E. Tabernacle, corner Manhattan Av. and Noble Street, Greenpoint, on Sunday, Jan. 2d, 1881, at 3 P. M.—John F. Valentine."

DR. GRAY moved that a suitable committee be appointed by the President to attend these memorial services as representatives of the Society, and that the usual committee to prepare a suitable obituary notice be also appointed by the Chair.

The motion was duly seconded and adopted.

THE CHAIR appointed as a Committee to represent the Society Drs. L. C. Gray, Jos. H. Hunt, and Edward Pembleton, and as the Committee on Obituary Notice, Drs. L. C. Gray, John A. Jenkins, and R. E. Vangiesson.

DR. WALKER, in reply to a remark that the personal friends of Dr. Sanford should be placed upon the Committee to represent this Society on the above mentioned occasion, asked why should the personal friends of the doctor be appointed on this Committee? It seemed to him that Dr. Sanford had performed work in this Society of a character which should be a sufficient reason for making the committee a representative committee. He felt that, although Dr. Sanford was a young man, he certainly was not what he would have been had he lived. A short time before his decease the speaker had had a conversation with Dr. Sanford upon subjects connected with the Medico-Legal Committee recently appointed, and of which he was Chairman, and the impression was that he would have gone heavily into the object for which that committee was appointed. He knew Dr. Sanford's feelings in regard thereto, and in this connection he hoped that that Committee would not be allowed to expire with the death of its Chairman, but that some one else would be appointed in his place. In conclusion, he hoped that the personal friends of the deceased should not be appointed on this Committee; that would be a mistake.

DR. PILCHER thought the remarks of Dr. Walker were in the right direction. The memory that our departed friend has left behind him is such that we should all honor it, and this Society should take especial pleasure in marking, in an unusual way, its appreciation of his worth, and, since it had received an invitation like that presented, by being present as a society at the proposed memorial services. He would like, for the purpose of bringing the subject before the meeting, to move that the officers and Council of the Society be requested to attend in a body at these services as representatives of the Society.

DR. STUART said he cordially agreed with the remarks made by Dr. Walker. He remembered that Dr. Sanford appeared before the Society just before he left the profession of medicine for the purpose of entering the profession of the law, and read an interesting paper, in that graphic style which was his own, and in that impressive manner which carried conviction, upon "Tracheotomy in Croup." That was, he thought, in the year 1875; that was the beginning, if he remembered rightly, of the discussion of the subject of tracheotomy in croup, which has continued almost to this day; and he thought he could trace the influence of that paper upon the members of the Society in that initial effort to this day. The motion of Dr. Pilcher, that the Society should officially be represented, met his very cordial approval.

DR. PROUT asked, why not accept the invitation as given, that both *officers and members* attend? Why not let as many members go as can? He offered that as an amendment to Dr. Pilcher's resolution.

The amendment was seconded.

THE CHAIR then put the amendment: That the Society in a body, so far as practicable, respond to this invitation. It was adopted.

THE CHAIR said that inasmuch as this covered the ground of the original motion, it was unnecessary to consider the subject farther. He would ask Dr. Walker whether he desired to modify the Obituary Committee as already appointed?

DR. WALKER did not; but he hoped that some member of the Society would be appointed upon the Medico-Legal Committee in the place of Dr. Sanford. He would make that as a motion.

DR. PROUT seconded it, and asked for the reading of the nominations made. He explained that he was not present when the nominations were made.

DR. KRETZSCHMAR asked that the Society be favored with information as to the place where the members could meet upon the occasion of the memorial service.

The invitation was again read, and the location of the Tabernacle was inserted, namely, corner of Manhattan Av. and Noble Street.

THE CHAIR called attention to the fact that there were two motions before the house unacted upon; one calling for the successor of Dr. Sanford upon the Medico-Legal Committee, and the other asking for the reading of the nominations.

DR. SQUIBB asked whether it was understood that the Council is to report on nominations for any deficiencies that may be in the representation to the State Medical Society, as well as the other societies.

THE CHAIR said he was of the impression that that has been delegated to the Council.

DR. BURGE: If not, I make that motion.

As the Chair had decided that the matter had been referred to the Council, the motion was not considered.

The motion of Dr. Walker to fill the vacancy on the Medico-Legal Committee occasioned by the death of Dr. Sanford, was then seconded, put and carried.

A MEMBER then asked for the names of the members of the Committee. The Chair replied that he was under the impression that the remaining members were Dr. J. S. Wight, Dr. G. K. Smith and himself.

DR. L. C. GRAY was then nominated in place of Dr. Sanford, and appointed by the Chair.

There being no more business, on motion the Society adjourned.

Medical Society of Kings County.

60th ANNUAL MEETING, JANUARY 18th, 1881.

LIST OF NOMINATIONS FOR OFFICERS AND DELEGATES.

By-Laws, Chap. 1, *Art.* 5.—Nominations for Officers and Delegates shall be made at the December meeting. The Secretary shall have the names of all nominees printed on slips of paper, two of which shall be sent to each active member.

☞ In voting, use the slip as a BALLOT, after having drawn a line through the names of those nominees for whom you do NOT wish to vote.

FOR PRESIDENT.

Dr. C. JEWETT.

FOR VICE-PRESIDENT.

Dr. G. W. BAKER.

Dr. F. W. ROCKWELL.

FOR SECRETARY.

Dr. R. W. WYCKOFF.

FOR ASSISTANT SECRETARY.

Dr. J. H. HUNT.

Dr. P. H. KRETZSCHMAR.

FOR TREASURER.

Dr. J. R. VANDERVEER.

Dr. W. WALLACE.

FOR LIBRARIAN.

Dr. T. R. FRENCH.

FOR CENSORS [five in number.]

Dr. G. W. BAKER,
" I. H. BARBER,
" G. D. BODKIN,
" L. C. GRAY,
Dr. R. HESSE,
" A. HUTCHINS,
" L. N. PALMER,
" J. D. RUSHMORE,
Dr. B. A. SEGUR,
" W. H. THAYER,
" B. F. WESTBROOK,
" J. S. WIGHT.

The President requests the following members to act as TELLERS:

Dr. COLTON,
" WILLIAMS,
Dr. RAYMOND,
" PAINE,
" De La VERGNE,
Dr. EMERY,
" PALMER.

Ἀσκληπιὸς ὁ Σωτὴρ

Χαρμα μέγ' ανθρωποισι, κακων θελκτῆρ' οδυναων.

Hymns of Homer, No. XVI.

PROLIFERATIONS.

——ANTISEPTIC TREATMENT OF ENTERIC FEVER.—Dr. Rothe, who formerly was a member of this Society, but now living in Germany, contributes to the *Deutsche Med. Woch.* his experience with the use of a combination of iodine and carbolic acid as an antipyretic, and at the same time antiseptic remedy, in enteric fever. He directs hourly doses, tablespoonful each, of tincture of iodine, 1 part; carbolic acid, 1 to 2 parts, and 120 of water, until a decided reduction of temperature and pulse is obtained; then every two hours until apyrexia follows, and it may be continued for three or four weeks.

——THE COST OF PREVENTION.—If we accept the authority of Dr. J. S. Billings, the ratio between prevention and charity is not very different from that which the adage gives as existing between prevention and cure. Dr. Billings says: "The interest on the money which, during the past fifteen years, has been raised by voluntary contributions in the North to aid Southern communities affected with yellow fever, would more than pay all the expenses" of quarantine measures for the exclusion of that disease from Southern ports. The ounce bears about the same arithmetical proportion to the pound that interest (at six per centum) does to principal.

——DR. J. B. MATTISON continues to receive a limited number of opium habitués, to whom he devotes his exclusive professional attention. Length of treatment, one to four weeks. Strict privacy secured, and success assured in all cases not complicated with organic disease, and in which there is an earnest desire for recovery.—*Adv.*

☞SEE PAGE 400.

——The Regular Monthly Meetings of the Medical Society of the County of Kings are held at 8 P.M. on the third Tuesday of each month, at Everett Hall, 398 Fulton Street.

The January meeting will be held on the 18th, at which the following paper will be presented:

Is a residence in Brooklyn calculated to aggravate or induce naso-pharyngeal or bronchial catarrh?—a report from the Committee on Hygiene.

Reports of Officers of the Society.

Elections for Officers of the Society for 1881.

MEDICAL SOCIETY OF THE COUNTY OF KINGS.

OFFICERS AND COMMITTEES FOR 1880.

President	C. Jewett, M D., 307 Gates Ave.
Vice-President	G. W. Baker, M.D., 48 Bedford Ave.
Secretary	R. M. Wyckoff, M.D., 532 Clinton Ave.
Assistant-Secretary	J. H. Hunt, M.D., 419 Hart St.
Treasurer	J. R. Vanderveer, M.D., 301 Carlton Ave.
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CENSORS.

B. A. Segur, M.D., 281 Henry St.
E. R. Squibb, M.D., 36 Doughty St.
F. W. Rockwell, M.D., 6 Lafayette Ave.
L. S. Pilcher, M.D., 4 Monroe St.
J. D. Rushmore, M.D., 129 Montague St.

DELEGATES TO THE MEDICAL SOCIETY OF THE STATE OF NEW YORK

(1878 to 1882.)

Drs. J. C. Shaw,
J. D. Rushmore,
R. M. Wyckoff,
A. Otterson,
Drs. G. G. Hopkins,
J. S. Wight,
A. Sherwell,
W. Wallace,
Drs. J. Byrne,
B. F. Westbrook,
E. N. Chapman,
F. W. Rockwell.

Chap. XI., Art. 2, of By-laws: "Any Member elected as Delegate to the Medical Society of the State of New York, who shall be unable to act as Delegate during two successive years, shall be considered to have vacated his position as Delegate."

COMMITTEES OF THE SOCIETY.

HYGIENE.

Drs. J. Walker,
B. Edson,
N. B. Sizer.

REGISTRATION.

Drs. W. E. Griffiths,
A. S. Clarke,
J. A. Jenkins,
Drs. W. G. Russell,
N. Matson,
F. W. Rockwell.
Dr. R. M. Buell

PHYSICIANS' MUTUAL AID ASSOCIATION.

Drs. B. A. Segur, W. W. Reese, J. H. H. Burge, A. Hutchins, W. G. Russell.
I. H. Barber, A. W. Catlin,

PROCEEDINGS

OF THE

MEDICAL SOCIETY OF THE COUNTY OF KINGS.

VOL. V. FEBRUARY, 1881. No. 12.

IS A RESIDENCE IN BROOKLYN CALCULATED TO AGGRAVATE OR INDUCE NASAL, PHARYNGEAL, OR BRONCHIAL CATARRH?

BY THE COMMITTEE ON HYGIENE OF THE MEDICAL SOCIETY OF THE COUNTY OF KINGS.

The physicians of Brooklyn have been asked so very often whether the air in our city is not "too strong" for people with weak throats and lungs, and the impression among the laity is so wide-spread that it is, and that the air of New York city is so very different, that your Committee believed that an endeavor to ascertain the *truth* in regard to this subject might form the basis of an interesting report to the Society.

To render such a report it became necessary:

1st. To interview as far as possible the older physicians in New York and Brooklyn.

2d. To examine the meteorological conditions of both cities for a number of years.

3d. To ascertain the views of received authorities, in their printed works, with especial reference as to the dependence of catarrhal affections upon climate, locality, or the individual.

4th. To ascertain whether catarrhal affections, if repeated in an individual, tend to the development of tuberculosis or real consumption.

5th. To endeavor to bring to light any causes, if there were any, that could be considered as tending towards the suggestion and maintenance of the popular opinion in regard to Brooklyn, as referred to above.

In this search for facts physicians were interviewed. The minutes of the Kings County Medical Society, from its foundation in 1822 to the present time, were carefully looked over, as also were the Transactions of the State Medical Society from its foundation in 1807. The reports of the Metropolitan Board of Health, files of some of the daily papers of twenty-five to forty years ago, and Stiles' History of Brooklyn.

The conclusions and impressions given by physicians, as detailed further on, will be probably considered by some of the members of the Society present as of little value, because they *are* impressions mainly; but it must be borne in mind that the impressions and conclusions are the results of an experience of twenty-five years and over in one city, and these impressions and conclusions *guide the daily practice of the gentlemen giving them*, and so public opinion is influenced. Few gentlemen, if any, have any carefully-arranged statistics to offer upon catarrhs. Personal interviews were therefore desired by the Committee in preference to written questions, for experience has shown that such questions are not always answered. No physician was seen who had not been in practice in either city for at least twenty-five years, with the exception of a few "specialists" and one or two well-known teachers in medical colleges.

As the term catarrh is a common one, and much used by the profession and among the laity, it was placed at the head of this report, but as the term is indefinite to some, each physician interviewed was told that by *nasal* catarrh was meant an inflammation of the lining membrane of the nasal passages, attended by a discharge, was ordinarily called coryza, or "cold in the head," and, when epidemic, influenza; that the term pharyngeal catarrh meant an inflammation of the pharynx or throat, accompanied by more or less secretion, constituting "sore throat" or quinzy, or in case of an exudation or false membrane, croup; and that bronchial catarrh meant bronchitis.

QUESTIONS ASKED PHYSICIANS.

The following questions in the main were asked each physician interviewed:

How many years have you practiced in Brooklyn or New York? Have catarrhal affections, in your judgment, increased of late years out of proportion to the increase in population? If they have, why? What do you consider to be the causes of catarrh? Are sea-board cities most subject to catarrhs? Of these cities is New York (or Brooklyn) especially subject?

Do you know of any theoretical or practical difference between Brooklyn and New York in this respect? Are catarrhal patients benefited by a change to either city from the other?

Are there any especially favorable localities for relief in New York (or Brooklyn)?

Would you advise catarrhal or consumptive patients to come to New York (or Brooklyn) to live?

What do you think of New Jersey as a resort?

Do repeated attacks of catarrh tend to the development of real consumption or tuberculosis?

OPINIONS OF BROOKLYN PHYSICIANS.*

Dr. J. H. H. Burge, having practiced in Brooklyn twenty-five years,

"Does not think that catarrhal affections have increased out of proportion to the increase in population, though we hear more of them. There are periodical attacks of throat troubles and of croup—independent of diphtheria. He believes that the main causes are sudden snow-storms followed by thaws (owing to nearness of city to salt-water), air is loaded with cold vapors—is cold and wet. Then there is the dry and irritating air from villainous furnaces. Some of the good health of St. Louis is probably due to heating through open fire-places.

"I have an idea," the Doctor continues, "that the air of Brooklyn is *somewhat* detrimental to throats and lungs. A friend of mine, with general irritation of lungs and throat, suffered in Brooklyn—was said to be better in New York, and even when crossing the ferry. Undoubtedly some people are influenced against Brooklyn by some New York doctors. Irritation of throats and lungs, of course, are common enough in both cities, and render people more liable to phthisis. As to the advantages of either New York or Brooklyn as a place of residence for consumptives, the difference is so little that it cannot be defined."

Dr. James Crane, Health Commissioner, has practiced medicine in Brooklyn thirty-five years:

"He does not see as much of catarrhal affections of nose or lungs or of throat troubles as formerly. He sees less and less tubercular disease from year to year. Generally there is a purer atmosphere. Certain affections are now rare which were common once—acute dysentery for instance. Catarrhal affections do not do well in winter and spring, or. at least, these seasons are not favorable. It is a current general opinion that these affections are most prevalent in Brooklyn. It is the experience of people who have moved into the centre of New York that they have been benefited. Certain sections of Brooklyn are more exposed than in New York, *i. e.*, the elevated sections of the Heights and the Hill. I believe," says the Doctor, "that people with tubercular diseases have a better chance in Brooklyn than in New York. Brooklyn air is stimulating to phthisis, gives a tonicity to the system. Quantities of people have gone from Brooklyn to Orange, N. J., with good results, and therefore it has sometimes advantages as a resort for catarrhal and consumptive patients.

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*It is but justice to both interviewer and interviewed to say that the opinions rendered, sometimes disjointed, were given in the midst of an active practice—without time for deliberation—but the off-hand opinions influence daily practice.

Dr. T. L Mason, having practiced forty-six years in Brooklyn, said to the interviewer :

" I never thought that Brooklyn was a particularly bad place for tuburcular disease, except in cases of confirmed consumption, but have thought it unfavorable for catarrhs of the respiratory tract, especially that portion of the city known as the ' Heights '; but there is a difference in that part of the city, whether the house is on the land side or not. A gentleman, for instance, from Boston, with tuberculosis, inhabited a house on the land side of Columbia Street, and did well. There is a great difference in the houses, between the temperature of the rooms on the southern and northern exposures, so that invalids, especially in changeable weather, should occupy sunny rooms. My impression is, that the central part of Brooklyn is better adapted for catarrhal patients and consumptives, than the eastern and western sides of the city. The air of Brooklyn is stimulating, but people coming here may *at first* be depressed and have colds. Some drinking men on returning from the interior have an increased desire to drink. This fact I have noticed in connection with some inebriates, who finally came into our Inebriate Home. The cause of catarrhs is something in the air; what it is, I do not know."

Dr. W. H. Dudley, after thirty-eight years spent in Brooklyn,

" Believes that catarrhal affections have not increased in undue proportion. His impression is that about twenty-five years ago, in answer to the charge that Brooklyn air favored the spread of consumption, an interesting article was written in the New York *Times*, by a Dr. Smith of Brooklyn, in which it was shown that throat diseases were most prevalent in Brooklyn, and cases of consumption in New York; the prevalence of the first due to the east winds, and the comparative freedom from the last disease, due to purer air. Catarrhal affections are most common on the Heights, and are less frequent as you go back from the river. Some patients have been improved by going to the centre of New York city, and by coming from Boston here, and even from New York."

Dr. A. N. Bell, now of Garden City, formerly a practitioner of Brooklyn for twenty-five years, states :

" That when patients have come to him complaining of catarrh 'caught' in Brooklyn or New York, he has been led to believe that the catarrhs were the results of a change of domicile merely, or a want of acclimation. Moving to the centre of New York is not a means of cure in my experience. The conditions of New York and Brooklyn tend to the development of tuberculosis. That part of Brooklyn near the South Ferry is much exposed to sweeping winds, and is not a desirable place of residence for those who are weakly."

Dr. C. L. Mitchell has practiced medicine in Brooklyn forty-four years, and believes

" That pharyngeal catarrhs have been more frequent, except of late, than they were twenty years ago. Cases were very numerous in 1847–8–9. In these years almost every one you met was suffering more or less. Pharyngeal catarrhs, in my opinion, are mainly due to a mixture of a land and sea air, such as we find along the coast. They never go to the lungs, and here in Brooklyn, where pharyngeal catarrhs are not infrequent, there is less consumption than in New York. According to health reports, about one death in every five or six in New York is from consumption, and in Brooklyn one in every eight. I have known of severe consumptive cases doing well in Brooklyn. Nasal catarrhs are due to sudden changes of temperature, and the same is true to a certain extent of bronchial catarrhs. A change of residence from Brooklyn to New York has, in some instances, relieved catarrhs, but in the majority of cases not. In Brooklyn I can see no difference as to prevalency of catarrhs between the Heights and the Hill. In both cities there is a low malarious condition which has been on the increase ever since the yellow fever prevailed in New Orleans. Bronchial catarrhs are about the same in frequency as elsewhere, barring the dampness of the air. Only a little way beyond Newark catarrhs decrease in frequency ; but on this side of the North River it is necessary to go above the Highlands to obtain relief."

Dr. Jos. C. Hutchison, after practicing twenty-seven years in Brooklyn, believes that

"Catarrhs are comparatively more prevalent than when he came to Brooklyn. They are less prevalent in that part of Brooklyn bounded by Fulton, Pearl, and Concord Streets, and by Hudson Avenue, than in other parts. The same is true as to consumption and all lung diseases. The doctor has sent people to this part of Brooklyn with good results. As to New York, he has known people to go there and be relieved, and he has known people to come to Brooklyn from New York and be relieved. He sees no difference in climate between New York and Brooklyn. There is very little difference as to acclimation in people with pharyngeal catarrh or with consumption. There is more malarial fever in Brooklyn now than formerly, and congestions of the pharynx are due at times, perhaps, to malaria ; but I believe that people subject to pharyngeal catarrh are *less* liable to consumption.

"There are advantages to be derived in sending patients to the country in and about Orange, N. J."

Dr. W. G. Hunt, for the larger part of forty-six years, has practiced in Brooklyn. He

"Does not know whether catarrhal affections have increased of late years. He has noticed that they appear in waves similar to the advent of the epizooty. They have been especially prevalent after snow storms, the like of which are not now seen. At such times we also expected scarlatina. I have never seen," says the Doctor, "any differences between New York and Brooklyn as to prevalency ; have had patients with catarrhal and tubercular diseases come to Brooklyn to live, and the diseases have not been aggravated. Plainfield and Orange, N. J., are good resorts for relief, but I have never recommended New York. In Brooklyn, I think the neighborhood of Sands Street a sunny location, and it might be a location for patients. I knew a lady suffering from a severe pharyngeal catarrh, who was relieved by a removal from Willow Street (on the Heights) to Washington Street. I do not think that Brooklyn is a bad place for persons with tubercular disease."

Dr. Andrew Otterson, thirty-five years in practice in Brooklyn, believes:

"That catarrhal troubles *are* more prevalent than formerly, due largely to increased furnace heat and artificial methods of living. In his earlier days houses were heated mainly by open fires. Proper hygienic surroundings will do much even for tuberculosis in our cities. I do not think," the Doctor adds, "that New York is superior to Brooklyn as a place of residence for people with affections of the air-passages (tuberculosis included.) As to comparative prevalence of catarrhs upon the Heights or Hill, I do not know, as my practice is mainly in other parts of the city. The neighborhood of old St. Ann's Church was always considered one of the sunniest and brightest spots in Brooklyn, but I do not know how it would be for catarrhal patients. Undoubtedly a mere change is sometimes serviceable in affections of the respiratory passages. I send people to the pine country of New Jersey; but people may be benefited by coming from the interior to Brooklyn, and *vice versa.*"

Dr. C. R. McClellan:

"After a practice in Brooklyn of forty-three years, can see no reason why Brooklyn is worse than New York as a place of residence, especially for catarrhal patients. The Heights correspond to the western side of New York City. The North River side of New York has always had a bad reputation for catarrhal affections. Brooklyn," says the Doctor "(along with other cities on the Atlantic coast), is not a favorable place of residence for consumptives. I would not send patients to New York for relief. There is a difference on a given day in Brooklyn in the temperature between one part of the city and another. I remember noticing this difference one cold day a number of winters ago. On my way down Pierrepont Street the wind was piercing and the cold intense. Meeting a medical friend, I remarked that the weather was very cold. He said that he had not thought so, especially when nearer Fulton Street than we then were. I could hardy believe that he was correct, but retraced my steps to ascertain, and on the corner of Clinton and Montague Streets found that the weather was considerably milder. Much of the bad reputation Brooklyn has acquired was originally started by New York real estate men. Then it is kept up by mairiageable young ladies who are anxious to mingle in New York society."

Dr. Daniel Ayres has practiced in Brooklyn thirty-five years:

"Does not think that, taking the whole thirty-five years into consideration, catarrhal affections have increased. In the early days there was colder weather in winter than we have now. Within the last twenty years the weather has been more capricious, and so at times there have been more catarrhs. The causes of catarrhs are seasons, cold and heat, improper clothing and methods of living, and furnace heat. I have in some instances advised that steam heat be substituted in houses for furnace heat, and catarrhal troubles have been relieved by the general health being improved. I have known people change their residences from Brooklyn to New York and from New York to Brooklyn, and seem to be benefited; but the benefit was due to the change from locality to locality, from one house to another, to a change in surroundings and not to climatic influences. My father lived in Greenwich Street, New York, for many years before he came to Brooklyn, and in both places his health was about the same. I have not found in Brooklyn that catarrhs are more prevalent on the Hill or Heights. When prevalent they are likely to be diffused through the city. I do not consider Brooklyn a good place for consumptives, but it is as good as any place on the sea-board. A removal to the country in and about Orange, and Montclair, N. J., is an advantage to catarrhal patients. In former times the New York doctors whose patients were coming to live in Brooklyn were largely responsible for the bad reputation given to Brooklyn. Many fashionable ladies wish to live in New York, and so make the advantage to health an excuse."

Dr. J. M. Turner, thirty-six years in practice in Brooklyn,

"Does not believe that catarrhs are any more frequent than formerly. All along the coast the conditions present tend to increase catarrhal affections. There are no special causes in Brooklyn. I can see no reason why New York should be different from Brooklyn. A thickly settled, compactly built section in one city, surely would be preferable to an exposed situation in the other; but I am not in the habit of sending people to New York for relief. I would not advise consumptives to come to Brooklyn any more than to any other coast city, yet I knew of a consumptive lady from Oneida County, who enjoyed improved health in Brooklyn for thirteen years. I do not remember that I have seen cases aggravated by coming here, but as a rule, I would not advise their coming. While certain parts of New Jersey may be of value as a resort, I am not certain what influence the prevailing fevers may have. There seems to be a different atmosphere beyond the first range of hills, back from our sea-board towns. As to Brooklyn, there is no doubt but that certain New York doctors have prejudiced people against Brooklyn, and in favor of New York."

Dr. T. W. Ostrander, fifty-one years in practice in Brooklyn, a physician who has literally grown up with the city, which, at the time he began practice, contained less than 30,000 inhabitants, claims that:

"Catarrhal affections have not increased in frequency, but are noticed more." As to causes, the Doctor assigns "the fitfulness of our climate as the main cause; Brooklyn ranking about the same in this respect as other sea-board cities. Boston and some other cities, perhaps, are more uniformly cold. Here, in February we may have warm weather. I do not think," he says, "that sea-board cities are favorable for consumptives, but the question of recovery depends largely upon atonic causes: the want of proper food; inattention to clothing and bathing, etc. I have never believed that Orange and other parts of New Jersey are particularly favorable; have learned to believe that pneumonia and other acute affections are more prevalent along the Jersey *coast* than elsewhere. As to catarrhal troubles, want of personal hygiene, dry and cold air, rather than any emanations are causes. New York is no better than Brooklyn in its freedom from catarrhs. Once Brooklyn was a mere appendage to New Yord, and was so considered by New York doctors, and is now, by some; and it is probable that some New York doctors detract from Brooklyn. In the winter season the vicinity of Willow and Columbia Streets are more unfavorable as places of residence than the section of the city near Washington Street, for instance."

Dr. S. Sherwell, Surgeon to the Throat Department of the Brooklyn Eye and Ear Infirmary, and practicing in Brooklyn for twelve years:

"Does not believe that catarrhal affections have increased; can learn of no difference between Brooklyn and New York as to prevalency. A change from one city to another may do good, even if it be from Brooklyn to Boston, for instance. Even in land-locked cities, as Vienna, there seems to be more catarrhs than in many of our sea-board cities. For consumptives Brooklyn is as good as any place on the coast above the capes of Delaware. A removal to Orange, N. J., is sometimes of advantage. I think that the strong air of Brooklyn is an excuse for some ladies who do not wish to live in Brooklyn. As far as localities in Brooklyn are concerned, I believe that the western and middle parts are healthier, as a rule, than the eastern parts."

Dr. J. D. Trask, of Astoria, formerly living in Brooklyn, writes:

"I resided in Brooklyn between the years 1844–48 inclusive. There was, at that time, scarcely a house east of Bond Street, and very few south of Harrison Street. The inhabited portion of the city lay chiefly along the water's edge, and, consequently, had atmospheric conditions somewhat different from those of the more insular portion since occupied by residents. While Brooklyn was regarded at that time on the whole as an exceptionally healthy city, there was a quite prevalent impression among the profession that chronic throat affections were of comparatively frequent occurrence. As to this lcality, I have always had the same impressions and have supposed that our insular climate afforded a ready explanation of this belief. I believe that a larger percentage of people will acquire catarrhal affections in Astoria or in Brooklyn than in White Plains."

OPINIONS OF NEW YORK PHYSICIANS.

Dr. Stephen Smith, of New York, in practice there twenty-seven years,

"Does not believe that catarrhs are proportionately more frequent than formerly. Catarrhal affections and consumption are common enough in our sea-board cities. Consumption is very common among the cellar population. Boston is especially noted for the prevalence of consumption. I would not recommend people with catarrh or phthisis to come to New York; yet people have come, even when hemorrhage from the lungs was severe, and yet have recovered health. Others again have their disorders intensified as they approach the sea-board. One gentleman could not come below Albany without his cough returning.

"Patients speak of the air of Brooklyn as being harsh, especially that of Brooklyn Heights, the air there being more moist and penetrating than in other parts of Brooklyn; but I do not *know* whether this is so. In New York I would send patients, if possible, to the Murray Hill region, the air being purer than along the river front. I never saw any particular advantage derived from sending patients to Orange, N. J."

The Doctor, in answer to the question, "What do you assign as causes of catarrhs?" said: "Climatic changes, and the dangers arising from defective public and personal sanitary measures, are productive of catarrhs and consumption."

Dr. Joel Foster, a New York practitioner of forty-five years, believes

"That nasal, pharyngeal and bronchial catarrhs *are* more frequent now; few people escape one or the other so it seems to him. He has himself been subject to nasal and bronchial catarrhs, and the severity of them in the country drove him to the city to practice. On the whole, he has improved, but still has to be careful. For two years after coming he was compelled almost constantly to wear a wire gauze mouth-piece whenever he ventured out of doors, and he believes that this precaution was of great service. He does not believe that there is any special immunity to be obtained by living in the central parts of New York City, where he has lived for many years; nor has he noticed any special locality in the city as favorable. There is much complaint in New York as to the frequency of catarrhs, though they are said to be more common in Brooklyn, perhaps because the weather there is two degrees or more colder in winter than in New York—*knows* of no other reason." He "cannot see why Orange is particularly a good resort; cold winds sweep down from the hills, and cold is more productive of catarrhs than damp.

"Consumptives gain when going away by being in the open air a large part of the time. They would do about as well here if they could live out of doors. I should not advise," continues the Doctor, "consumptives to come to New York. For catarrhal affections and consumption, I would prefer the ridge of New York to that of Brooklyn, and would certainly keep away from the water side of Brooklyn; but always with all patients I should insist on plenty of air and suitable clothing.

Dr. Benj. McCready, forty-eight years in practice in New York,

Does not believe that catarrhal troubles have increased, and says: "Catarrhs depend more upon heredity and the want of hygienic measures than upon climate, viz., the restriction to the house; the want of proper food, deficient or excessive quantity, and of wrong quality. All these especially deteriorate the health of the children, and they grow up with weakened vitality. I doubt whether the climate of the sea-coast has as much influence as people imagine. *Theoretically*, there is no difference between New York and Brooklyn in that respect. *Practically*, I *know* of no difference—have families living in Brooklyn—know nothing of any benefits of a change from one city to the other. Brooklyn may perhaps be colder than New York. I believe that high ground, free and regular exposure to the air, and attention to hygiene, are of more importance than mere climate in the relief of catarrhs. Consumptives should live in as equable a climate as possible—as in North Carolina and East Tennessee. I know nothing of Orange, N. J., as a resort. Certainly it is not advisable for consumptives to live in New York; and I do not know that one locality in New York is superior to another."

Dr. Alonzo Clark, after practicing in New York for forty-seven years, stated :

"That nasal and pharyngeal catarrhs have increased of late years, but not so bronchial catarrh. There is no definite relation between the two, and I know of no reason why one has increased and the other not. As to the cause of catarrh, it is something in the atmosphere; what, I do not know; probably not ozone or mere cold. Catarrhs seem to travel from east to west; especially has this been the case with influenzas.

"I do not think that there is any difference between New York and Brooklyn as far as immunity from catarrhs is concerned. The air in Brooklyn is said to be 'too strong,' and yet I have seen no evidence of its being so. I am asked frequently by Brooklyn people whether they shall move to New York to free themselves from disorders of the respiratory tract, *and I always say no.* Brooklyn and New York are far above Colorado and the high mountain States in a freedom from catarrhs, so I am led to believe. I would not advise people to come here to live, except from such States. I have no means of knowing (my practice consisting largely of consultations, and consultations for catarrhal affections being rare) whether one locality in New York is better than another. I am not a convert to New Jersey or even Atlantic City, do not believe they have superior advantages to other places on the coast. Upon the east coast of Massachusetts there are one-third more deaths from consumption than towards the western side. In New York, during the cholera epidemic, hydrometric experiments showed that there were 6° less moisture in the built-up parts of the city than in the surrounding country. This may be explained by the fact that in the country moisture soaks into the ground and is again given off, while in the city it passes away into the sewers.

"As to the relation of catarrhs to consumption, I do not think that either nasal or bronchial catarrh ever causes phthisis, but it has appeared to me that those who are predisposed to phthisis have catarrh of the air-tubes oftener than others, and that their coughs are more protracted. It is so common for phthisical patients to say that their 'cough began with a cold,' that I early began to cross-examine them on the point of 'cold,' and it has been very rarely that their impressions have been verified, not oftener than the chances of the occurrence."

Dr. Fordyce Barker has practiced in New York for thirty years:

"He does not think that there are more catarrhal affections now, in proportion to the increased population, than formerly. They undoubtedly vary in frequency in different seasons; have seemed to be common within the last year. I cannot," the Doctor adds, "formulate the causes of catarrh; they are mainly atmospheric. My theory is that they are more prevalent in sea-board cities. I have a general impression that they are more common in Brooklyn than in New York, but I cannot tell why. Acting on that belief, I have advised people to come *to* New York, and at present recall five persons who have been benefited by the change. I do not know of any benefit derived by a change *from* New York to Brooklyn. I do not know that one locality in New York is better than another. As to advising people to come to New York with consumption, I can only say, that in my experience, New York is singularly exempt from tuberculosis, *i. e.*, in proportion to its size. Since 1857 I have only signed one burial certificate for death from phthisis.

"There is no evidence that catarrhs end in consumption. This depends on other circumstances.

"As to New Jersey being a suitable place of residence for relief, I have not had enough experience from which to form an opinion."

Dr. J. T. Metcalfe, thirty-four years in practice, says:

"That he thinks the proportion of catarrhal affections to the ratio in population *has* increased. Of course I see more cases," he adds, "with the natural growth of practice; but it seems to me that as the so-called comforts of life have increased, catarrhs have increased, people are housed more, eat more, etc. At the South, among the negroes, where I spent a part of my life, catarrhal affections, and especially coryza, were very rare. Such affections are especially prevalent along the sea-coast. In my experience there is no difference between New York and Brooklyn in that respect, though there is an impression that New York is the better place, but such an impression against a city may arise naturally, because one's interest is in another city; and, after all, when you get down to it, the evaporated opinion of most of our medical men is, probably, that there is little or no difference between Brooklyn and New York. I do not know that one locality in New York is better than another. I would not advise catarrhal or consumptive people to come to New York. To people who frequently suffer from coryza especially, I say, you will probably do better by making a change than to live here, even if you have local treatment; for local treatment, in my opinion, will not compensate for unfavorable atmospheres and surroundings. The mountainous parts and pure districts of New Jersey are favorable places of resort.

"Generally speaking, I should say that repeated attacks of catarrh predispose to consumption."

Dr. J. R. Leaming, thirty-one years in practice:

"Cannot see that catarrhs have increased. They are attended to more than formerly, and are better treated. The causes are, in my opinion, mainly a disturbed state of the digestive organs, and changes in the weather. Of course, inattention to personal hygiene has more or less to do with causation. I do not know that there is an especial prevalency in sea-board towns. I believe that the average health of the people in our cities is better than that of people in the country. The people in New York, for instance, live better than those in the country. There is a *general impression* that Brooklyn is worse than New York in the prevalence of catarrhs, but I do not *know* that this is true. I never would advise a change from the one city to the other, unless for the benefits which are sometimes derived from a mere change alone, and from the improvement in the condition of the digestive organs which sometimes accompanies such a change. I am consulted frequently by Brooklyn people, but have seen no reason, as a rule, to advise a change of residence to New York. One lady, for instance, living in Brooklyn, and desiring to move to New York—an invalid with fibroid phthisis, accompanied by hemorrhage—I advised to stay in Brooklyn, as her surroundings were of the very best, and she could not better herself by moving to New York. I suppose there may be some places in New York that are better for relief than others, but I do not know of such places. From inland localities invalids, even with consumption, can come to New York and remain for a time with benefit. I think the high parts of New Jersey—Morristown and Plainfield for instance, and the pine regions—are valuable places of resort.

"Catarrh is an effect. A congestion of some part of the mucous membrane perhaps is produced in the first instance by indigestion, and is followed by a secretion—that is catarrh. Whenever there is an interference in the circulation in the lungs, then broncorrhea follows; repeated congestions end in a thickened mucous membrane; this condition may extend to the pharynx, the ear, and the nasal passages. Such cases as these are liable to tuberculosis, especially if there is a tendency to tuberculosis in the individuals. Catarrhs are only prominent as results. To prevent their recurrence, attention to hygiene and a change of residence are necessary."

Dr. Ellsworth Elliott, twenty-seven years in practice in New York, believes:

"That, with the exception of pharyngeal catarrh, catarrhs have not increased; that people take better care of themselves than formerly. The causes of catarrhs, in his opinion, are mainly cold and inclement weather. He believes that catarrhs and consumption are most prevalent on the sea-board; has an impression that Brooklyn is more liable to such affections than New York; but he *doesn't know* of the difference as a fact. Theoretically, the eastern and western parts of Brooklyn are more liable, on account of being near much level and low land, the air from which is not altogether healthy; has heard of healths being improved by people coming to New York. Between one part of New York and another there is not difference enough to make a distinction. My impression would be that the old settled parts (*i. e.* New York proper) are best. Even in some cases of consumption I would advise people to come here, for the benefit of a change, and for better food. New York people, as a rule, are better fed than people in the country. Orange, N. J., is a healthy resort I expect; yet climate of itself has little to do with throat troubles. Recovery from these and consumption is a matter of nourishment and enjoyment. Catarrhs do not predispose to consumption, except in so far as they weaken the system."

Dr. Alfred Loomis, twenty-four years in practice in New York, does

"Not think that catarrhal affections have increased; cannot very well formulate the causes of catarrh; does not think that sea-board cities are more subject to catarrhs than other cities—people, for instance, from the lake regions along Lake Erie come to New York to escape from catarrhs. Interior cities may be better." He adds: "I think Brooklyn is a worse place of residence than New York; there are more cold northeast winds. There is not as much protection from them as in New York. These winds are undoubtedly bad for catarrhs. They are broken here. I have been accustomed to look upon Brooklyn as being as unfavorable as Boston. I have known people to be relieved by moving from Brooklyn to New York, but not from New York to Brooklyn. The pine regions of New Jersey, about Lakewood and Morristown, are good. As to advising people to come to New York with catarrh or consumption, it depends on where they come from. In New York I advise people affected to live in the central parts of the city, about the region of Murray Hill, my favorite place, and to keep away from the river. Catarrhs do not end in tuberculosis, but repeated attacks of catarrh in persons of a phthisical diathesis are liable to lead to a catarrhal phthisis."

Dr. Austin Flint, Sr., has practiced in New York twenty-two years. He thinks

"That probably catarrhal troubles are more frequent than formerly. Does not care to define the causes, but thinks that inattention to hygienic measures is the most common. He has no data from which he can say anything as to the increased prevalence of catarrhs along the sea-board. There is a very common *impression* in New York as to the greater prevalency of catarrhs in Brooklyn over New York, but," he adds, "there is no theoretical reason why it should be so, and I *have never put any confidence in any such statements.* As to advising people with catarrh or consumption to come to New York, it depends on where they come from. I have a favorable impression of certain parts of New Jersey. Catarrhal troubles never end in tuberculosis. The relief of catarrhs by local treatment, in my opinion, is very slow. Much more can be effected by a suitable change of residence and attention to hygiene."

Dr. Luis Sass, a "specialist" of twenty-two years' practice in New York, thinks

"Catarrhs are caused by cold, suppression of perspiration, scrofula, syphilis, and neglect of hygiene. Believes that they are more prevalent in Brooklyn than New York, owing to moist air, more direct currents of air, and to more malaria. There are probably fewer cases of catarrh in the higher parts of New York, as Murray Hill, for instance, but taking the whole city, catarrhs are pretty evenly diffused. I would not advise consumptives to come to New York, but I should prefer to have them come to New York rather than Brooklyn. The high parts of New Jersey are good, but the trips over the ferries may be injurious to many. Catarrhal troubles are not liable to end in tuberculosis, but in catarrhal pneumonia. He believes that catarrhs have increased in frequency.

Dr. Alfred C. Post has practiced in Brooklyn two years, and in New York forty-nine years.

"Cannot say that catarrhal affections have increased; believes that the main causes of catarrh are a changeable climate and defects in personal hygiene, especially too much or too little clothing; has an impression that these affections are most prevalent in sea-board cities and towns." He does "not see any practical difference between Brooklyn and New York, and therefore has not advised people to change their respective places of residence. Theoretically, Brooklyn is more subject to these affections, being more surrounded by water than New York, especially some parts of the city near the Wallabout." He believes that the "back-bone part of New York is probably more healthy and better adapted for residence of catarrhal patients than along the river fronts where there is more dampness in the cellars and more overcrowding." He "would not as a rule advise people with catarrhs or consumption to come to New York to live, unless the change would be attended by more comforts, as, for instance, the substitution of a warm, comfortable house for some cold bleak country house." The Doctor believes that "catarrhal phthisis may result from repeated catarrhs, but has 'doubts' as to tuberculosis of the lungs. The mountain regions of New Jersey are favorable for the relief of catarrhal affections."

Dr. Andrew H. Smith, Surgeon to the Throat Department of the Manhattan Eye and Ear Hospital, has practiced twelve years in New York City and

"Cannot see that catarrhal affections have increased of late—are noticed more and treated more. As to the causes of catarrhs, there is some climatic influence; what it is I do not know. Overheated houses give disastrous results. I have never been able to assign dust as a cause. Have never noticed that car drivers and conductors are particularly susceptible to catarrhs; but in fact those who live a large part of the time in the open air are not as liable as those who house themselves. I believe that catarrhs are most common along the sea-board, but I cannot say that I know of any difference, as to prevalency, between New York and Brooklyn; have believed that bronchial catarrhs and weak lungs do best in New York, but I have not advised people to change their residences. There are no particularly favorable spots in New York, and would not advise people with catarrh or consumption to come to New York unless for treatment. Catarrhal phthisis, but not tuberculosis, is apt to follow repeated attacks of catarrh. The interior portions of New Jersey, especially about Morristown, are favorable resorts for relief."

Dr. Louis Ellsberg, who for twenty years has been a "specialist" in the treatment of catarrhal affections,

"Is not certain whether catarrhal affections have really increased. More attention is being paid to them, and they can be treated more successfully than formerly. The principal causes are, 1st. Defective personal hygiene, and 2d. Climatic influences. They are more prevalent along the sea-board. I *think* Brooklyn is worse than New York, but much depends upon where individuals live in either city, and whether they have to cross in the ferry-boats. People have been relieved by coming to New York to live, and I have advised the change; have known of individuals with catarrh removing to Brooklyn from economical reasons and living there without any detriment at least. Brooklyn air is more bracing than that of New York. I believe that the avenues in New York are better for catarrhs than the streets; have not advised any changes, but have known people to make them with benefit. I would not advise people with catarrh or consumption to come to New York, as far as climate is concerned, but would for treatment and the improved hygenic measures which the city can furnish. Repeated catarrhs rather lead to loss of tone of the air vesicles, to emphysematous diseases, than to other conditions; but in a person predisposed (by the repeated congestions and thickenings) catarrhal phthisis will result. I have sent patients to the high regions of New Jersey with benefit."

Dr. Beverly Robinson, in practice seven years in New York,

"Could not say whether catarrhs have increased. He believed that they are noticed and treated more. The causes are impure air, bad ventilation, wet feet, bolting of the food, hot rooms and cold rooms, furnace heat. He did not believe that the climate of New York was especially productive of such troubles, or that they are particularly frequent in sea-board cities and towns, judging from what Western observers say as to the frequency of catarrhs in the West. He did not *know*, from his own observations, any difference between Brooklyn and New York, but only from rumors. Has known of cases where a change to New York was favorable, but this result may have been due to mere change alone. Some of his patients have been benefited by a change from the lower part of New York to the upper. Between Twenty-third Street and Central Park he considered the most favorable part of the city, because it is better drained; the people have exerted themselves more to maintain good surroundings. He would advise catarrhal and consumptive patients to stay away from New York. He believed that repeated catarrhs may end in catarrhal pneumonia, but whether in real tuberculosis, he did not know. As to New Jersey, he *knew* that Atlantic City was a favorable resort, and the same was true as to some high parts of the State."

Dr. C. R. Agnew, twenty-nine years in practice in New York, thinks:

"That all the forms of catarrh, nasal, pharyngeal and bronchial, have increased; that the causes of this increase are mainly domiciliary; among the causes is the tendency to overheating of houses, then the wearing of impermeable fur garments, bad shoeing, especially among the women; the growing disinclination to walk; then of late there has been a diminished rain-fall. This inattention to health laws produces defects in tissue-building; there is a morbid sensibility of the skin and mucous membranes. I arrive at the causes by result of treatment, for I find that by proper shoeing, open fires, the cold bath in the morning on rising, followed by brisk rubbing with a pair of English bath mittens and the use of the strap, and the exposure of the skin to the air, very many times catarrhs disappear without any local treatment whatever. I used to think," adds the Doctor, "that sea-board cities were more subject to catarrhs than other cities, but we now get a good many cases from Denver. Probably susceptible people are more liable to catarrhs on the coast than off of it, owing to moisture and a low temperature at certain seasons of the year. I have thought that the river front of Brooklyn was more favorable for the spread of catarrhs than one mile back. A change from either city to the other will do good, especially for the first two years after removal. There are no statistics as to comparative prevalence of catarrhs in Brooklyn and New York.

"In either city the locations are favorable where the houses look to the south, particularly if they overlook spots of foliage, except in cases of hay fever. Low levels are not good. I should advise patients to come to New York from the New England States, especially from the coast line, and from certain other sections of the country. The pines of New Jersey are favorable. I have never been able to conclude that repeated catarrhs ever end in tuberculosis, except when nasal catarrh has produced an obstruction in the nares, causing people for a length of time to breathe through the mouth."

Dr. James Anderson, in practice in New York since 1822:

"Has no data as to whether catarrhs have increased or not. Probably changes of weather main causes of catarrhs. He has an impression that Brooklyn is worse than New York for catarrhal troubles. Forty years ago this impression was common. He has known people helped even with consumption by a removal to New York, but never to Brooklyn. The backbone of New York City is the best part of the city—somewhere about Bleecker Street and Broadway. The coast side of New Jersey he does not like, but the northwestern parts of the State are good.

SUMMARY OF MEDICAL OPINIONS.

It will be seen by an examination of these opinions given by physicians, that a majority believe that catarrhal affections have increased in frequency of late years, or that they are noticed more and treated oftener. That the causes of catarrh are climatic, domiciliary, and the neglect of personal hygiene. In the opinion of some of the gentlemen who have had a large experience in the treatment of catarrhs—as Dr. Agnew for instance—the neglect of personal hygiene is the main cause. Those who believe mainly in climatic influences, ascribe the source of injury to cold, or to variable changes, or, as Prof. Clark says: "To confess that one does not know the cause is the first step towards wisdom; so I say, 'there is something in the air; what it is I do not know.'" Several gentlemen believe that over-heating of houses, especially by furnaces, thus drying and heating the air, is most largely responsible for catarrhs.

The majority believe that catarrhs are not liable to end in consumption, except in certain instances, where there is a natural tendency to consumption, so that catarrhal patients need not necessarily move from a place for fear that consumption will result.

Many believe that coast cities are not, as a rule, best adapted for catarrhs and consumption, but that even a change to them, if accompanied by comfortable surroundings, will be of benefit. As to any actual difference in point of choice, between Brooklyn and New York, among the majority of Brooklyn physicians there is the belief that certain exposed parts of Brooklyn, as the Heights and Hill, are not favorable for catarrhs, and a change to certain parts of New York would be preferable. A few physicians have reason to believe that the older parts of Brooklyn and New York are well adapted as places of residence; the majority have not had their attention called to these sections.

Of the New York physicians the majority know by *rumor only* that Brooklyn is worse than New York, and some, with that impression, advise removal to New York. Some, like Prof. Metcalfe, believe that the "evaporated opinions" of most practitioners is that there is so little difference, if any, between New York and Brooklyn, that they would not recommend removal from one city to the other except for the benefit of a mere change, which may be serviceable, from one part of a city to another, or from one house to another house, even in the same vicinity. *All* agree that catarrhal affections and consumption are common enough in both cities. One observer, Dr. Bell, believes that the unsanitary conditions of both cities favors the development of tuberculosis.

But few of the physicians interviewed fail to think well of the "pines" and grounds of New Jersey as a resort for catarrhal, and even consumptive patients, and these few, in the main, belong to New York. Some of these believe that the malarial fever in New Jersey is an objection.

Your Committee, in pursuance of the truth, after the interviews with physicians, turned its attention to meteorological conditions. It was hoped that some reliable information could be obtained from all cities with at least 100,000 inhabitants, so that a general comparative estimate of climatic influences could be secured; but the "returns" were so imperfect, whenever obtained, that the attempt was abandoned, and a comparison only of New York and Brooklyn effected.

Of the meteorological records kept at Governor's Island, the Marine

Hospital, Brooklyn, at Central and Prospect Parks, the tables recorded at the two last stations seemed to be best adapted to our purpose.

From the records for a long time kept by the late E. Merriam, of Brooklyn, it was believed valuable information would be obtained, but on inquiry it was found the records were only thermometric, consisting of hourly observations, day and night, for a series of years. Dr. Minor's tables also were of no avail, as they indicated merely the rain-fall.

A TABLE OF METEOROLOGICAL CONDITIONS OF BROOKLYN AND NEW YORK, FOR THE SIX YEARS FROM 1874 TO 1879 INCLUSIVE, SUMMARIZED FROM THE RECORDS OF THE METEOROLOGICAL BUREAUS OF CENTRAL PARK, NEW YORK, AND PROSPECT PARK, BROOKLYN.

	BROOKLYN.	NEW YORK.
BAROMETER.	Height of instruments above the sêa level, 145 feet.	Height of instruments above the sea level, 97 feet.
Mean for 6,573 Observations	30.051 inches.	29.918 inches.
" Maximum	30.894 "	30.924 "
" Minimum	29.125 "	28.420 "
" Range	1.769 "	2.504 "
THERMOMETER.		
Mean for 6,573 Observations	51.22°	51.89°
" Maximum	98.50°	98.00°
" Minimum	2.00°	—3.00°
" Range	100 50°	101.00°
RAIN FALL.		
Annual rain and snow reduced to water	43.467 inches.	42.73 inches.
DURATION OF STORMS.		
An annual duration	37d. 11h. 45m.	34d. 8h. 10m.
PSYCHROMETER.		
Elastic force of aqueous vapor in inch of mercury.	.346	.342
RELATIVE HUMIDITY.		
(Saturation being 100).	77	73

An examination of the foregoing tabulation shows that the climatic differences between the two cities is very slight indeed. It confirms as by mathematical demonstration what a knowledge of their geographical position and surroundings certainly indicates. The calculations have been made from the highest points in the respective cities, the station in Brooklyn being 48 ft. higher than that of New York, and this increased height may in a large degree account for the slight difference in results as before mentioned. It is to be regretted that your Committee has not been able to obtain any records showing the meteorological differences, if there are any, between the Heights and Hill districts of Brooklyn, or the old settled parts of Brooklyn and New York.

It is stated* "that records kept at the junction of Grand and Essex Streets, New York, a position of average temperature, where there was as much protection from humidity and the winds as is possible in built up parts of the city, it was noticed that the mean temperature is usually a little higher and the sensible humidity is frequently less than in Brooklyn and the rest of the Metropolitan District." With this statement there is no evidence that any old portion of Brooklyn was compared with this station at Grand St., New York. If the comparison was made with some outlying section of Brooklyn, as we have reason to believe, the statement speaks well for Brooklyn. We do not know at present that the old parts of Brooklyn are not even superior to the old parts of New York as to climatic and local influences.

CHANGES IN OUR CLIMATE.

It may be urged by some that changes of late years in our climate have been responsible for an increase in catarrhal affections, and therefore we hear more about them ; but Mr. Daniel Draper, director of the Meteorological Observatory, Central Park, New York,† has pretty conclusively shown that in the winter season at least, no real change has occurred along the Atlantic coast cities, especially in New York, Philadelphia, Charleston and Boston, *i. e.*, through indefinitely long periods of time. (As Brooklyn's meteorological conditions are similar to New York, this conclusion is alike applicable to our city.) After calling attention to the average results of his investigations he adds : "These average results exhibit only one phase of the problem. They do not show the fact that there are brief cycles of heat and cold, of moisture and dryness, following each other under the operation of some unknown law, perhaps not of a meteorological, but of an astronomical origin."

May it not be that a prominent incentive to the present popular belief in an increased prevalency of catarrhs has been the creation of "specialists" for its treatment. Formerly the field was occupied by ignorant men. Now educated men freely offer themselves as "throat specialists," yet Brooklyn has less than one-half dozen "specialists, while in New York in one year seventeen sprang up, armed and equipped, and to-day the number in New York is out of all proportion to the size and needs of the population, if we take Brooklyn as a standard of comparison.

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* Report Metropolitan Board of Health—1866.

† Popular Science Monthly, Oct., '72, "Has Our Climate Changed?"

A SUMMARY FROM THE WORKS OF AUTHORITIES OF THE CAUSES OF CATARRHAL AFFECTIONS.

a.—Of Pharyngeal Catarrhs, Mainly.

Personal idiosyncrasy, straining the voice as in shouting. As secondary to nasal catarrh, indiscretion in leaving off clothing, or in getting feet wet. Rude changes in the temperature of the air. Local irritants, as tobacco, spices and hot drinks. Certain atmospheric causes as yet unknown; thus, in spring and autumn catarrhs often prevail *endemically.* The same causes (perhaps, *e. g.*, pollen) sometimes operate to produce the epidemic varieties: *e. g.*, influenza and hay fever are symptomatic of certain exanthemata."*

Generally "moist and cold climate with frequent and sudden and severe variations of temperature."†

Biermer‡ draws attention to chilly winds with increased moisture.

Lebert noticed this before, as also the effect of sudden depressions of temperature. He finds that the "fair weather" years are *not* the best, but those when the transitions of the seasons and the changes of the temperature are *least marked.* He has also proved that the extremes of temperature and pressure produce less trouble than *sudden* changes. He shows that in Switzerland 50 per cent. of all catarrhal bronchitis is in the first *four months of the year.* Heller obtained nearly similar results at the Vienna Hospital.

b.—Causes of Bronchial Catarrh.

The sudden cooling off of the whole body, or a part of it, *i. e.*, the process of "taking cold." "Inhalation of dust," affections so well shown up by Hirt. Catarrhs from inhalation follow the following order of frequency: 1st. Inhalation of *vegetable* dust, next metallic dust, then that of animal origin, and least noxious is mineral dust. Inhalation of gases and vapors—vapors most often of nitric and sulphuric acids—then of hydrochloric acid. Catarrh from iodine inhalation is very rare. Hirt has noticed *marked tolerance* of these *irritants after a few attacks of catarrh.* He finds a few vapors that are not only innocuous but seem to diminish a disposition to catarrhal disease, and even to hasten the favorable termination of an already existing catarrh. In this class belong vapors from oil, from glue, burning tar, and *salt air.*

It has been claimed by some that "salting the streets" is responsible for many catarrhs; but the mass of testimony given in *The Sanitarian* of March, 1876, does not endorse this view. The theory that an undue amount of ozone in the atmosphere is a cause of catarrhs has not been established. During the prevalence of the epizootic or influenza among horses a few months since, the daily tests at Central Park showed almost an entire absence of ozone from the atmosphere.

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* Fraenkel, von Ziem., Vol. 4, passim.

† Riegel, von Ziem., Encly., Vol. 4, p. 302.

‡ Virchow's Hand. der Spec., Path. und Ther., Band 5, p. 651.

THE CAUSES OF THE POPULAR OPINIONS THAT CATARRHAL AFFECTIONS ARE VERY COMMON IN BROOKLYN, THAT BROOKLYN AIR IS TOO STRONG FOR PEOPLE WITH A TENDENCY TO WEAK THROATS AND LUNGS, AND THAT NEW YORK IS A BETTER PLACE TO LIVE IN FOR SUCH PEOPLE THAN BROOKLYN.

In searching for these causes it was a matter of interest to your Committee to ascertain, if possible, when the prevalency of catarrhs was first noticed in Brooklyn.

The earliest account of Brooklyn, with especial reference to its state of health and prevailing diseases, which could be found, is in the MSS. address* of Dr. Matthew Wendall to the Kings County Medical Society in 1836. The doctor writes:

> "I commenced practice in this rapidly growing city in 1809—at that time a pleasant village with a population of two thousand inhabitants. The entire population of our county made an aggregate of near ten thousand, for the medical wants of which there were six physicians." * * * * * * "The compact part of the village at that period was comprised in the triangular space made up of Fulton, Main, and Front Streets, which, with a trifling addition of a few streets extending for a short distance from them, together with a number of neat dwellings and villas scattered over both eastern and western heights, with their tastefully embellished court-yards, and their widened spaces between decorated with varieties of shrubs, vines, fruit, and ornamental trees, formed what was not inaptly designated by visitors and strangers, the *Queen of Villages*. Unrivaled for the beauty of its location and residences, it was alike celebrated for its healthfulness—insomuch that invalids from the Sunny South were sent here to confirm their convalescence—and children from the adjoining city were quartered among us during the summer, to enjoy the benefits of pure and refreshing air, and to partake of the simple and nutritious diet of the country, so indispensable in the treatment of diseases caused by the contaminated atmosphere and unwholesome food of a crowded city."

After thus showing that in 1809 Brooklyn was considered healthy—so much so that invalids from the South, and from the neighboring city of New York, came to the village for relief—Dr. Wendall states that "disease in some form would generally develop itself, and occasionally an epidemic would make its appearance." He then gives a brief account of the epidemics which occurred from 1809 to 1836, viz., yellow fever, typhoid pneumonia, puerperal fever, scarlet fever, and cholera; but nowhere does he mention influenzas, or catarrhs, or consumption.

In 1823 Dr. G. T. Hunt, in an address† to our Society, takes a hopeful view of the future, and says: "It is a truth that cannot be controverted that the practice of physic is becoming much more simplified than formerly. Our epidemics have become fewer, less alarming, and more easily cured. Our malignant diseases are fewer in number, and yield much more readily to a judicious treatment than formerly, nor is it improbable that an acute disease will lessen every year, or assume a milder type and be more speedily removed." The opinions of our older Brooklyn physicians, as given in the early part of this report, seem to show that the types of disease have changed, and the prevalent diseases of to-day were not prevalent in 1823. Nowhere in his address does Dr. Hunt refer to the prevalence of consumption, influenzas or catarrhs, or to the "too strong" air of Brooklyn. It is probable that in those days people who lived on high ground, such as Brooklyn is mainly built on, expected stimulating air, and guarded themselves against its *bad* effects, or they were of a hardier race, lived more in the open air, and were better able to stand sudden changes in winds and temperature than the average of our population can to-day. In 1814* the population of Brooklyn was 3,805. In 1820, 7,175.

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* Kindly loaned the Committee by Dr. T. L. Mason.

† Minutes of Kings Co. Med. Soc., 1823.

"In 1824 Brooklyn's career of progress may be said to have fully commenced. Streets were opened and lighted, and the first Board of Health was appointed to look after sanitary interests, though in 1819 there was a public meeting called to devise measures for preventing the spread of epidemics.† In 1832, in a report‡ by Drs. John B. Zabriskie, Nelson A. Garrison, and John C. Fanning, on 'Medical Topographical Account of the County of Kings,' it is stated 'that there are no lakes, rivers, or canals in the county. But in the hills which traverse the island are found numerous ponds, in which the water collects during every rain, and is retained almost the whole year.' The report then states that leaves and vegetables falling into these ponds putrefy in the summer, and this condition of things, together with the 'miasmata' which arise from the salt meadows and marshy grounds in the southern part of the county, are the principal causes of the epidemics which prevail annually."

"The hills are composed of sand and fragments of primitive rock. * * * The soil is in most parts sandy. At the base of the hills is a bed of clay, mingled with sand, which forms a shallow coat of a few feet in depth, but all below this, as far as the earth has been penetrated, is sand." . . . "The land is in a good state of cultivation." "There are over 20,000 inhabitants in the county; 15,000 of these reside in the town and village of Brooklyn. The houses are generally well arranged with respect to air and light, and the inhabitants are comfortably clothed. Wood is the most common fuel, and of this there is a good supply. Coal has been much used of late in Brooklyn and its vicinity." . . . "The diet of the poorer classes is generally good, and as the county lies near the sea, fish form an important article in the diet of the poor." "Every one, unless he is culpably idle, negligent, or given to dissipation, can gain a decent livelihood." "The water in most places is pure and soft. There are some wells containing water which holds in solution earthy salts, but generally the water is sufficiently pure to be used for all domestic purposes." "The village of Brooklyn being a market for the surrounding country, and being a place where manufacturers and commerce are flourishing, is subject to all the diseases common to cities and large towns. From the great influx of unprotected foreigners, and the accumulation of blacks, small-pox and varioloid are constantly prevailing, notwithstanding all efforts to check their spread." "The principal endemic diseases prevailing in this county are cutaneous diseases, diseases of the intestines and intermittents. The intermittents are very frequent in the spring, and generally not very serious." "In 1834 Brooklyn applied to the Legislature for a city charter. The city of New York threw her whole weight and influence against the measure." . . . "The real key to the opposition made by New York were the fears of her real estate speculators."*

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* Stiles' Hist. of Brooklyn, Vol. 2.

† Stiles' Hist. of Brooklyn, Vol. 2.

‡ Trans. State Med. Soc. of N. Y., 1832.

Up to this time we have reason to believe that there was comparatively little said against Brooklyn, but now (1834) owners of real estate were fearful lest Brooklyn would outrun New York, and it is probable from what we have already learned from our older Brooklyn physicians that the New York doctors,* finding that some of their patients were moving to Brooklyn as it was developing into a city, from self-interest largely, first remonstrated, then hinted at the unhealthfulness of, and finally openly charged Brooklyn with being the seat of intermittents, and as having an air that was "too strong" for weak lungs, for about this time consumption was first considered to be a prominent cause of death. It will be remembered in this connection that it has been shown that there were many strangers and blacks congregating in the village, and by want of cleanliness, forethought, and probably overcrowding, varioloid and small-pox raged. Why should not tuberculosis begin to be noticed when the surroundings were beginning to be favorable to its development? Brooklyn was probably not even as bad as New York at that time, for *it* already was beginning to be the metropolitan city, to which flocked more strangers, more blacks, more people who would live crowded together, than in Brooklyn. The investigations by Dr. Stephen Smith, the report of the Metropolitan Board of Health for 1866 and 1869 (p. 408), show that consumption in a city is most common where there is overcrowding and dampness. One report says the opinion is warranted that damp and undrained localities in the metropolitan district are quite as productive of fatal tuberculosis as are the bleakest mountain sides. In 1866 New York was the great entrepot of 300,000 immigrants a year. Many of these, according to the report, stay in the city, live differently from what they had been accustomed to in the agricultural regions from whence they came, crowd together, and are largely responsible for the large death-rate from consumption.

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* Stiles' Hist. of Brooklyn, Vol. 2, p. 210.

* See statement of Dr. James Anderson, of New York, that forty years ago Brooklyn was looked upon as not suited for "weak lungs."

What was true in 1866 was proportionately true in 1834. As early as 1796, according to Dr. Alexander Coventry,* New York City's reputation for healthfulness was on the wane, for he says : " On my arrival in New York, in 1785, I found the whole space between the east side of Broadway and the river was vacant. It was a sandy soil with a gradual descent to the west, at whose foot the tide washed a sand and gravel beach ; this shore might have been selected by Hygiea as her chosen abode. The citizens of New York bore in their faces the bloom of health, and no signs of endemic disease were discernible in their looks. Ten years afterwards the change in the looks of the inhabitants astonished me ; those living near the docks and wharves especially had pale sallow looks, the yellow skin and muddled eyes that we are so accustomed to see in the country where endemic diseases are common." He assigns this change to the poisoning of the air by accumulated filth in and around the wooden piers.

A rapid increase in population, overcrowding with its accompanying filth, were alike common to both cities as they began to grow.

" Both cities were originally, by topographical surroundings, well adapted for health. Decaying piers and wharves, obstruction of and filling up of original drainage streams, with the causes already referred to, began to increase the death-rate,"† and to be responsible to a certain extent for our present death-rate.

There is no doubt but that, years ago, Brooklyn was considered an appendage to New York, and to New York went people for medical advice, for hospital accommodations, to shop, and for amusement. From New York people came to Brooklyn, imbued with the idea that the air was " strong," and that the city was inferior to New York in point of healthfulness.

In 1835 Dr. Rapelyea,‡ President of the Kings County Medical Society, suggested that the Society should appeal to the Mayor and Common Council to provide proper accommodations for suffering unfortunates, instead of relying upon New York " in a spirit of dependence"; but it

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(*) Address, as President, to New York State Med. Soc., Feb., 1824, Trans. of the Soc. for 1824.

(†) See Egbert L. Viele's Report to State Med. Soc., Trans. 1861, and Report of Metropolitan Board of Health, 1866. Report of Committee on Hygiene and "Sanitarian."

(‡) Minutes of Kings County Med. Soc., July 13, 1835.

was a number of years afterwards before the present City Hospital was opened. The medical men of Brooklyn were undoubtedly responsible in a measure for the popular dependence on New York, for in 1836 (see minutes of Society) the Kings County Medical Society authorized a Dr. Pennel, of New York, as a delegate to represent the Society at the State Medical Society.

Then appear, without any contradiction from Brooklyn doctors, in the Brooklyn *Eagle* of 1855, long articles (filling one or two columns) from New York doctors (?) (presumably quacks), in which the people are told of how frequent catarrhs have become in Brooklyn, and how dangerous they are if neglected; that they end in aggravated forms of consumption; that the writers, by a new instrument devised by them, for examination of the throat and nasal passages, are able to examine the air passages thoroughly, and to apply medicines directly to the part affected. Then the articles ended with the doctors' names and the location of their offices in *New York*. Your Committee has reason to believe that between the years 1834 and 1857 articles were written in the New York papers in favor of New York and opposed to Brooklyn, but the want of adequate time for search has prevented their being found.

All this feeling against Brooklyn—the preying of "harpies" upon the fears of the people, the dependence of Brooklyn people upon New York—after all need not be wondered when we consider that from 1800 to 1824 Brooklyn was a beautiful healthy village to which New Yorkers could come for health and enjoyment, and from which Brooklynites could go to New York for more excitement than was to be found in their small village. No one imagined that the population would ever be very large; but when, in 1824, Brooklyn began to grow, and, in 1834, became a city, then every one who had a selfish interest in keeping people in New York and away from Brooklyn, was liable to give vent to his feelings.

Examine the following statement as to the population, and we can easily see how the fears of the New Yorkers might be aroused at that time, and how the rapidly increasing population increased naturally the amount of sickness and made consumption prominent:

POPULATION OF BROOKLYN FROM 1790 TO 1881, FROM THE CENSUS OF THE STATE OF NEW YORK AND FROM THE UNITED STATES CENSUS.

In 1790	2,143	inhabitants.
" 1800	3,034	"
" 1810	5,100	"
" 1814	4,564	"
" 1820	8,105	"
" 1825	11,749	"

In 1830	17,019	inhabitants.
" 1835	24,529	"
" 1840	36,233	"
" 1845	59,574	"
" 1850	96,838	"
" 1855	205,250	"
" 1860	266,661	"
" 1865	296,378	"
" 1870	396,099	"
" 1875	482,403	"
" 1880	554,465	"

CONCLUSIONS.

From all the sources that have already been drawn upon, and from the meagre health reports of health officers up to 1862, scattered through the State Society Transactions, we conclude:

1st. That Brooklyn and New York, by their topography, are well adapted for health, and that in the early days of each they were remarkably healthy; that when they began to develop into business and home centres, new dangers to health appeared in over-crowding, accumulation of filth, damming up of water-courses, and defective sewerage and drainage. As the city enlarged, catarrhs and consumption increased.

2d. That when Brooklyn was beginning to develop, its growth was so rapid, and its attractions so many, that many business men of New York desired to live here for economy and health; that seeing this, interested individuals in New York attacked Brooklyn with various innuendoes.

3d. That catarrhs and consumption are common in both cities, and have been for years, but the prevalence is not any greater, to say the least, than that of other sea-board cities, and not as great as in some. By some observers, the affections are not believed to be more prevalent than is the case in some inland cities even.

4th. The experience of leading physicians, meteorological records, statistics, and history, show that there is no theoretical reason why there should be much, if any, difference between Brooklyn and New York in the production of catarrhs. New York has a proportionately larger death-rate from consumption than Brooklyn, but the city is different; there is proportionately a larger transient population, as immigrants, boarders in hotels and boarding-houses, so that it may be partly accounted for in this way.

(The report of the late Dr. R. C. Stiles, as Deputy Registrar of Brooklyn, to the Metropolitan Board of Health, Dec. 31st, 1868, shows that at that time consumption had not increased in Brooklyn in proportion to the increase in population. The improved sanitary condition of the city was responsible for this fact. The doctor showed that consumption was most common where the land was the *lowest*, and where cellars were overflowed.)

5th. The testimony of physicians shows that there is *practically* no real difference between the two cities, as a whole, with reference to the prevalence of catarrhs. Exposed situations may assist in causing a localized prevalence. Protected portions of the city tend to diminish the liability to catarrh.

6th. That a mere change alone from New York to Brooklyn, or from Brooklyn to New York, or accompanied with better food, more healthy and cheerful surroundings, may relieve a catarrhal patient. That a change, with or without the above acquirements, from an exposed part of one city, to a protected part of the other, from one house or section in either city, to another house or section in the same, may likewise afford relief.

7th. That our sea-board cities, though not in the main considered favorable places of resort for catarrhal and consumptive patients, yet benefit may be derived by coming to them, provided the change is attended by increased comforts, enjoyment, better opportunities for treatment, and attention to personal hygiene.

8th. That though climatic and city influences have much to do with the creation of catarrhs, yet defective heating, lighting, airing, sunning, and drainage of houses, with improper views as to air, clothing, bathing and exercise, are the main causes.

Having arrived at these conclusions, after what is believed to have been a careful study, your Committee can answer the question propounded at the outset of this report, with great confidence, viz.: A residence in Brooklyn *is not* calculated to aggravate or induce catarrhal affections, if the laws of health are followed out with respect to the city, to the domicile, to the individual. The same is true of New York and other seaboard cities, as far as we know. Brooklyn has an advantage over many of them, in that its air is purer—there are fewer local public nuisances. This air will not be "too strong" or stimulating (as that is what is probably meant by the term "strong") to the person in good health, to the average individual, who, knowing that our city is subject to sudden changes in temperature, etc., lives accordingly.

JEROME WALKER, M.D.,
BENJ. EDSON, M.D.,
N. B. SIZER, M.D.,
} *Committee on Hygiene.*

THE MEDICAL SOCIETY OF THE COUNTY OF KINGS.

The Sixtieth Annual Meeting of the Medical Society of the County of Kings was held on the evening of Tuesday, Jan. 18th, 1881, at No. 398 Fulton Street, at 8:15, the President, Dr. Jewett, in the Chair, Dr. Wyckoff, Secretary.

There were present about sixty members.

The reading of the minutes of the December meeting was omitted for the reason that they were not present.

The Secretary asked, and it was granted, permission to add the following to the minutes of the December meeting:

"The President declared the following duly nominated candidates to be members of the Society, namely:

"Harriet Pillsbury, M.D., Wom's Med. Col., N. Y. Inf., 1880; Anna M. Brown, M.D., Wom's Med. Col., N. Y. Inf., 1880; Charles Hogeboom, M.D., Col. P. and S., N. Y., 1851; Edgar Elting, M.D., Col. P. and S., N. Y., 1852; F. H. Miller, M.D., Univ. N. Y., 1879."

The Council reported acceptance to membership of the following duly nominated candidates: J. M. Thomas, M.D., Bel. Hos. Med. Col., 1869; J. C. Schapps, M.D., Bel. Hos. Med. Col., 1880; F. Lucas, M.D., Col. Phys. and Surg., N. Y., 1880; A. E. Peck, M.D., Col. Phys. and Surg., N. Y., 1855.

H. L. Cochran, M.D., 303 Henry Street, L. I. Col. Hos., 1879, was proposed for membership by Dr. E. S. Bunker.

The Treasurer read the statistical portion of his Report.

The Secretary read the roll of delinquents—a list of those ineligible to office—having been absent three successive meetings of the Council.

On motion of Dr. Burge, the ineligibility of the above cases was removed.

The rules for the government of the tellers, as adopted for the Annual Meeting of 1880, were, on motion of the Secretary, re-affirmed for 1881.

The Secretary announced that, as instructed by the Society at the December meeting, the Council had prepared a ballot for the election of delegates to the State Medical Society and to the American Medical Association. One delegate to the State Medical Society was to be elected to fill a vacancy, and thirty-one delegates to the American Medical Association.

The Chair announced the withdrawal of three candidates, namely, Drs. G. W. Baker and F. W. Rockwell for Vice-President, and Dr. J. H. Hunt for Assistant Secretary. It would be necessary to write in the name of some other candidate when voting, unless these gentlemen concluded to withdraw their objections. He called attention, also, to the fact, that the name of Dr. Palmer had been entered in the list of candidates for Censor by mistake.

Dr. Hutchins asked whether these withdrawals were to be considered as final; had the Society no power to vote for them? In other words, can members vote for whom they please?

Dr. Baker desired Dr. Rockwell to remain as a candidate, and hoped some other member would be elected Censor in his place.

Dr. Rockwell would have withdrawn from the candidacy if he had been present at the December meeting. Through some misunderstanding his name had appeared on the list. He advocated the election of Dr. Baker.

DR. SQUIBB thought the question might arise, whether it was competent for the Society to nominate at this meeting? Nominations made at this meeting might not be legal or in order. If so, these withdrawals might have a different effect from that which was contemplated.

THE CHAIR said the Secretary had called his attention to the second section of the first chapter of the By-Laws, namely: "The officers of the Society shall be a President, etc., who shall be elected by ballot by a majority vote at the annual meeting." He ruled that it is not necessary that they shall have stood in nomination for a month.

DR. SQUIBB asked whether there was not a by-law which states that nominations shall be made at the December meeting?

THE CHAIR stated that this by-law seemed to make it competent for the Society to elect from members other than those who had been nominated at the December meeting.

DR. SQUIBB: If that is the decision of the Chair that is the end of it.

At this point of the discussion,

DR. WILLIAMS moved that those gentlemen who had signified their intention to withdraw be requested to remain in nomination.

The motion was duly seconded, and adopted unanimously.

THE CHAIR called the list of tellers and found the following to be present: Drs. Williams, Paine, De la Vergne and Emery, and he requested Drs. Paine and Emery to remain in the room to collect ballots until the balloting had been completed.

Drs. Read and Edson were appointed tellers in place of those who were absent, and the members were instructed to prepare their ballots.

While the members were casting their ballots and the tellers were counting the same, the Librarian presented the following Report, which, on motion, was accepted and ordered to be entered on the minutes.

REPORT OF THE LIBRARIAN FOR 1880.

The report of the excellent work done by the Committee on Library, submitted to the November meeting of this Society, detailed the most of the history of the Library proper during the past year. In addition to the books bought from the fund contributed to the Committee, there have been a few added by gift, and a few others sent to the PROCEEDINGS for notice.

The shelves of the Reading Room have testified to the fullness of the current literature that has been, at all times, available to the members of the Society. These journals have been received mainly as exchanges with the PROCEEDINGS. A few have been received on subscription.

The other and remaining valuable additions to the Library have been in the collection of files of the prominent medical journals. By gift, purchase and exchange, by the rummaging of various collections of old books in several cities, by the interested kindness of friends in various parts of the country and in Canada, who have seen the standing appeal in the PROCEEDINGS—odd journals have been picked up—so that the result has been that very complete and valuable bound files of medical journals have become the property of the Society. The Librarian confesses to a great deal of pleasure in his short experience as a bibliomaniac, a pleasure which it would be impossible to share with this Society, and whose details, if collated, might, perhaps, not prove interesting in a report.

In addition to short files of many less important journals, the following list comprises the bound volumes of medical journals now on the shelves of the Library, collected, arranged and bound mainly during the past year:

Boston Medical and Surgical Journal, 1829-1880.

London Lancet, 1824–1880, with these deficiencies: Sept. 30th, 1837, to Nov. 12th, 1842, inclusive; Apr. 1st, 1843, to Oct. 7th, 1843, inclusive; 1847, Dec.; 1848, Dec.; 1849, Jan., Feb., Mar., Apr., July, Sept., Oct., Dec.; 1850, Apr., June.

Philadelphia Medical Times, 1870-1880.

Medical Record, 1866–1880.

New Remedies, 1872–1880.

Compendium of Medical Science, 1868-1880.

Braithwaite's Retrospect, 1840–1880.

Transactions Medical Society State of New York, with these deficiencies: 1832, 1833, 1838, 1839, 1846, 1847, 1848.

Transactions American Medical Association, Complete.

British and Foreign Medico-Chirurgical Review, 1848–1862.

Obstetrical Journal of Great Britain and Ireland, 1873–1880.

New York Journal of Medicine, including the American Medical Times, 1843–1880.

American Journal of Obstetrics, 1869–1880.

The Practitioner, 1868–1880.

Medical and Surgical Reporter, 1858-1880.

American Journal of Medical Science, 1826–1880, with this deficiency: 1846, Oct.

Ranking's Abstract, 1845–1880, with the following deficiencies: Vol. 36, July to December, 1862; Vol. 37, January to June, 1863; Vol. 38, July to December, 1863; Vol. 39, January to June, 1864; Vol. 40, July to December, 1864; Vol. 41, January to June, 1865; Vol. 42, July to December, 1865; Vol. 43, January to June, 1866.

Psychological Journal, 1867–1876.

The Librarian bespeaks for his successor the courtesy and interest that have been shown by members of the Society to the retiring officer.

Respectfully submitted,

ALEX. HUTCHINS, M.D., *Librarian Med. Soc. County of Kings.*

THE TREASURER presented his Report, as follows:

TREASURER'S REPORT.

JANUARY 20, 1880, TO JANUARY 18, 1881.

The Treasurer of the Medical Society of the County of Kings respectfully submits the following Annual Report, covering the period from January 20, 1880, to January, 18, 1881.

STATISTICAL.

There are, January 17, 1881, on the roll of active members, the following names, 311 in all, in the three classes, viz.: Class I., comprising those members who have paid all dues to date ; Class II., those less than two years in arrears ; and Class III., those who have completed membership within the time covered by this report.

CLASS I.—Ambrose, D.; Anderson, Wm.; Andrews, J. A.; Armor, S. G.; Ayres, Benj.

Baker, G. W.; Ball, John ; Barber, Isaac ; Bartlett, H. L ; Bates, W. H.; Bliss, W. A.; Bodkin, D. G.; Bowron, F. W.; Brady, S. J.; Brodie, J. A.; Bunker, E. S.; Burge, J. H. H.; Byrne, John ; Buell, R. H.; Bennett, W. H.; Briggs, B. M.; Bristow, A. J.; Brush, G. W.; Bird, Jas. R.

Caemmerer, W. H.; Candidus, P.; Carpenter, E. W.; Catlin, A. W.; Chapman, E. N.; Childs, S. B.; Church, Stewart; Clark, C. F.; Clark, Jos. E.; Cochran, Alex.; Colgan, Jos. P.; Colton, F. H.; Conkling, J. T.; Cooper, John; Corbally, T. P.; Corey, Chas.; Crane, James; Cushing, G. W.; Coverly, J. H.; Campbell, A.; Curry, A. H.; Cook, C. D.; Cutter, G. R.; Clarke, A. S.; Carreau, J. A.; Creamer, Jos.

De Bowes, T. N.; Dower, A. J.; Daly, G. M.; Drury, Geo.; De Long, W. A.; De Mund, F. C.; Dodge, D. A.; Dudley, W. H.

Edson, Benj.; Emery, Z. T.; Ensell, J. E.; Eskens, Francis; Evans, G. A.

Fearn, H. A.; Fessenden, B. F.; Figueira, M.; Ford, Nath.; Fowler, G. R.; Freeman, J. N.; Frickenstein, T.; French, T. R.; Fuhs, J.; Fuller, S. E.; Furgang, Albert; Farrar, J. N.; Ford, Charlotte W.; Feeley, Jas. F.

Gilfillan, Wm.; Gilfillan, W. J.; Gray, L. S.; Gregory, J. Elmore; Griffiths, W. E.; Griffin, J.; Griffing, G. P.; Griggs, S. C.; Gillette, F. B.; Gleavy, J. J.

Hallam, A. E.; Halsey, J. Condit; Harrigan, J.; Harvey, E. J.; Haslett, Audley; Hawley, J. S.; Henderson, A. C.; Hesse, R. G.; Hopkins, Geo. G.; Hunt, Jos. H.; Hutchins, Alex.; Hutchison, Jos. C.; Hyde, J. W.; Healy, Jos.; Hesse, H. J.; Harlin, W. H.; Hoyt, F. M.; Hardrich, H.; Harcourt, J. M.; Hughes, O. J. D.; Hewett, W. B.

Irish, L. B.

Jenkins, J. A.; Jewett, Chas.; Jewett, C. C.; Johnson, J. G.

Kuhn, G. R.; Ketcham, G. F.; Kretzschmar, P. H.; Krauter, J.; King, J. S.

Lamadrid, J. J.; Leighton, N. W.; Lewis, E. A.; Loewenstein, H.; Little, W. A.

Maddren, Wm.; Mann, F. P.; Mason, T. L.; Mason, L. D.; Matheson, A. R.; Mathewson, Arthur; Matson, N.; Matson, W. B.; Mathews, H. C.; McClellan, C. R.; McCorkle, J. A.; Merritt, John; Metcalfe, E. G.; Mitchell, C. L.; Mattison, J. B.; Marlin, W. H.; McCosker, Thos.; Morse, Verranus; McLean, H. C.; Moore, J. F.; Malone, Edw.; Madden, Frank; Meyer, Jos.; Mann, C. S.

North, N. L.; Newton, Buna.

Olcott, Cornelius; Olmstead, S. H.; Ormiston, Robert; Ostrander, G. A.; Otterson, W. C.; Ostrander, F. W.; Ostrander, J. W.

Pendleton, E.; Pilcher, L. S.; Potter, C. H.; Pratt, W. H. B.; Prout, J. S.; Paine, A. R.; Peck, E. F.; Pillsbury, H. H.

Quinn, J. R.

Randolph, W. H.; Rappold, J. C.; Raymond, Jos. H.; Read, H. N.; Riedel, H.; Robinson, S. C.; Rockwell, F. H.; Rodney, A. J.; Rushmore, J. D.; Russell, W. G.; Ray, J. A.; Rand, H. W.; Reynolds, Edwin; Rogers, H. C.; Richardson, J. E.; Rochester, T. M.; Risch, H. F. W.; Rice, M. Louise; Reese, W. W.

Santoire, S.; Schenck, P. L.; Schenck, Teunis; Schlatter, C. B.; Schmidt, C. F.; Segur, B. A.; Shaw, J. C.; Shepard, A. W.; Sherwell, S.; Sizer, N. B.; Skene, A. J. C.; Smith, Geo. K.; Snively, J. C.; Spier, S. F.; Squibb, E. R.; Sterling, J. H.; Stone, R. H.; Stuart, F. H.; Sullivan, J. H.; Swalm, W. S.; Sweeney, Jas.; Swift, Wm.; Szigethy, C. A. H. de; Sherman, Wm.; Stub, Arnold; Small, H. G.; Smith, W. Scott.

Terhune, J. J.; Terry, C. H.; Thayer, W. H.; Turner, J. M.

Vanderveer, J. R.; Van Harlingen, J.; Van Kleek, R. L.; Van Ness, John; Vrooman, C. W.; Van Wagner, N. B.; Van Duzee, T. A.

Wackerhagen, G.; Walker, Jerome; Wallace, Wm.; Watt, Jas.; Westbrook, B. F.; Whaley, E. A.; White, H. B.; White, J. A.; Wieber, Geo.; Wight, J. S.; Wilbur, J. G.; Wilde, Thos.; Williams, W. H.; Willis, L. A.; Wunderlich, F. W.; Wyckoff, R. M.; Williams, H. F.; Whiting, H.; West, F. E.; Welty, G. W.; Willson, Jared; Woodhull, Kate C.; Welton, R. B.; Wheeler, E. A.; Wade, J. D.; White, G. Rankine.

Young, J. S.

Zabriskie, J. L.; Zellhoefer, C.—Total, 251.

CLASS II.—Baldwin, N. A.; Baker, R. C.; Beardsley, W. E.; Chase, D. E.; Corcoran, J. J.; Chase, W. B.; Eddy, Chas.; Ford, A. W.; Fletcher, Geo.; Goodwin, F.; Henry, J. W.; Howe, J. F.; Joye, Thos.; Keller, Ferd.; La Roe, J. G.; Leary, J. B.; Lowell, A. L.; Lindridge, E. F.; Mulligan, E. L.; Mordough, E. F.; Newman, G. W.; Otterson, Andrew; Schmetzer, G.; Smith, Edw. P.; Tittemore, N.; Turner, H. C.; Van Brackle, J.; Valentine, J. F.; Westbrook, G. R.; Wade, J. C.; Young, C. F.—Total, 31.

CLASS III.—Atkinson, G. H.; Arnold, J. H.; Burnes, A. M.; Bell, L. T.; Caro lan, E. J.; Conroy, W. E.; Cardwell, G. A.; De La Vergne, C. E.; Davidson, R. T.; Gallaher, Thos.; Houghton, A. S.; Hogeboom, C. L.; Johnson, C. H.; Kene, J. A.; Lung, Jesse B.; Myersburgh, A. G.; McNaughton, Geo.; Oliver, G. P.; Palmer, Earnest; Pendegast, P. J.; Raub, J. M.; Reimer, R. F. W.; Sörensen, S. J.; Smith, Jos. E.; Schwarzenberg, G. A.; Van Zile, B. S.; Waterworth, Wm.; Wells, G. W.; Zeppenfeldt, C. A.—Total, 29.

MEMBERS TWO YEARS IN ARREARS, and liable to suspension, under Chapter XII., Section V., of By-Laws:—Becker, John (not found); Colton, E. G.; Corbin, Job; Fisk, N. S.; McIllroy, S. P.; Rhodes, R. R.; Schapps, C. H.—Total, 7.

REMOVALS (*as far as ascertained*).—Bretz, G. Z.; Hillyer, J. H.; Limeburner, C. A.; Perry, J. S.; Stewart, Jas.; Van Weber, F. C.; Zeppenfeldt, C. A.—Total, 7.

DEATHS, 1880.—Hamilton, J. W. (April 4); Drake, Nelson S. (May 31); Baylis, Thomas (June 15); Thorne, J. Sullivan (September 1); Ross, Wm. (November 2); Sanford, Wilbur F. (December 12); Elmendorf, J. H. L. (December 25).—Total, 7.

FINANCIAL.

Permanent fund on deposit in the Brooklyn Savings Bank	$1416 65	
Interest on above sum January 1, 1881	57 20	
Total		$1473 85

EXPENDITURES.

Dues to New York State Society for 1880		60 00
Rent of Everett Hall, 11 stated and 1 annual meeting		180 00
" " Reading Room and Library, 12 months		320 04
Subscriptions to Journals for Reading Room		17 00
Sum ordered by vote of Society at last annual meeting to Dr. Alex. Hutchins, and by him donated to Library Fund		100 00
Binding 25 copies of "Proceedings," as ordered by Society		18 75
Printing 1,000, and binding 15 copies of "Manual," as ordered by Society		113 00
Printing papers and discussion relating to pepsin	$115 00	
Special stenographic report relating to same	20 00	
Rent of Hall for special meeting	10 00	
Asst. Secretary's notices for same	4 75	
Total		149 75
60 copies State Society's Transactions, 1880, and expressage		86 00
Stenographic reports, 11 stated meetings		132 00
Binding 69 volumes of Journals for Library		69 00
George Duncan, commission on collections		96 12
Other expenditures		384 62
Total		1726 28

RECEIPTS.

Balance in Treasury, January 20, 1880	339 84	
Sale of State Transactions	12 15	
Annual dues, initiation fees, and arrearages from January 20, 1880, to January 18, 1881	1389 00	
Total		1740 99
Total expenditures		1726 28
Balance		14 71
Balance in Treasury, January 18, 1881		14 71

REMARKS.

At the last Annual Meeting, the Treasurer was directed to add two hundred dollars ($200.00) to the Permanent Fund of the Society (whenever, in his judgment, it could be done), from the General Fund in his hands. It will be seen from the above statement of the finances that he could at no time do so, without involving the Society in debt. It is evident also, from the experience of one year with another, that *whatever* sum may be assessed as an annual due will not be entirely realized.

For example, call the active members of the Society, in round numbers, three hundred, and suppose an annual due of five dollars ($5.00) to be agreed upon, the event would show that fifteen hundred dollars would not be realized, but something like this would happen :

In the first place, forty members would be likely to neglect paying their assessment during the year ; and, secondly, one hundred and fifty of the others (which would be a fair estimate), instead of remitting directly to the Treasurer, would pay to the Society's collector, and hence the dues of those thus paying would bring to the treasury not five dollars ($5.00), but four dollars and forty cents ($4.40) each. Consequently, in the first of these cases, there would be a loss of two hundred dollars ($200.00), and, in the second, of ninety dollars ($90.00), in all nearly three hundred dollars ($300.00).

In case the Society continues to own and carry on the Reading Room, with its incidental expenses, and to profit by the improvement of stenographic reports of its meetings, it will be utterly impossible to lower the tax for the coming year. On the assumption that the present status is to be continued, the Treasurer offers the following recommendations :

1. That the annual dues for the coming year be five dollars ($5.00).

2. That the Treasurer be authorized to purchase sixty, or as many copies of the State Transactions for 1881 as will meet the requirements of the State Society, these volumes to be disposed of in the same manner as were those of 1880 ; and that at the time of the receipt of the Transactions for 1881, should any copies of 1880 remain on hand, these be distributed gratis to such members as are not in arrears, in order of application.

3. That twenty-five copies of the " Proceedings " for 1880 be bound at the expense of the Society, at a cost not to exceed seventy-five cents a copy.

4. That, with the exception of such material as may be at present in the hands of, or prepared for the binder, no further material be bound at the expense of the Society's General Fund, until the Society by vote so determine at the next annual meeting, but that the Library Committee be empowered to have bound such journals or pamphlets in the possession of the Society, as they may consider requisite for the shelves of the Library, drawing for the purpose, however, on the funds raised by subscription.

All of which is respectfully submitted.

J. R. VANDERVEER, M.D.,
Treasurer of the Medical Society of the County of Kings.

DRS. BURGE and MASON were appointed a committee to audit the accounts of the Treasurer, and report during the evening.

The recommendations of the Treasurer were then considered at length.

Recommendation first: That the annual dues for the year 1881 be $5.00.

DR. SQUIBB moved as an amendment that $1.50 of this amount be appropriated towards the support of THE PROCEEDINGS, which was seconded.

DR. WESTBROOK thought the annual dues should be less, say $3.00, and that whatever was needed above that amount ought to be obtained by subscription.

DR. KRETZSCHMAR also moved as an amendment, that the dues for the year 1881 be $3.00, and it was seconded.

The amendment of Dr. Kretzschmar was lost, on a call for a division, by a vote of 17 to 28.

DR. SQUIBB, in advocating his amendment, stated as his reasons that much of the time and labor of the gentlemen, who had conducted the journal so long and so ably, had been expended in soliciting advertisements. There are certain advertisements which offer themselves to medical journals naturally; there are also other advertisements which require a considerable amount of solicitation. It is this latter class which occupies so much time and energy in the conduction of a journal. His amendment was to make this class of labor unnecessary to the editors, and he was of the opinion that the funds of the Society could well afford the relief which had been so well earned.

After further discussion the amendment of Dr. Squibb was accepted, and the first recommendation adopted.

A motion to close the polls was here made and carried, and the tellers proceeded to count the votes.

DR. BURGE, of committee to audit the accounts of the Treasurer, reported that they had examined the Treasurer's accounts so far as time admitted, and had found the same correct.

The report was accepted, and the committee discharged.

The second recommendation was amended by inserting the word "gratis," and was adopted as follows:

That the Treasurer be authorized to purchase sixty, or as many copies of the State Transactions for 1881 as will meet the requirements of the State Society, these volumes to be disposed of in the same manner as were those of 1880; and at the time of the receipt of the Transactions for 1881, should any copies of the Transactions of 1880 remain on hand, these to be distributed gratis to such members as are not in arrears, in the order of application.

The third recommendation was adopted without alteration, as follows:

That twenty-five copies of the PROCEEDINGS for 1880 be bound at the expense of the Society, at a cost not to exceed seventy-five cents per copy.

The fourth recommendation was amended by striking off, with the consent of the Treasurer, the last clause, and, as adopted, is as follows:

That with the exception of such material as may at present be in the hands of or prepared for the binder, no further material be bound at the expense of the Society's general fund until the Society by vote so determine at the next annual meeting, but that the Library Committee should be empowered to have bound such pamphlets or journals in the possession of the Society as they may consider requisite for the shelves of the library, drawing for that purpose, however, on the fund contributed by subscription.

On motion of Dr. Hopkins, the report of the Treasurer was then adopted as a whole.

The report of the Committee on Hygiene, entitled "Is a Residence in Brooklyn calculated to Aggravate or Induce Naso-Pharyngeal or Bronchial Catarrh?" was read by the Chairman of the Committee, Dr. Walker, with apologies for its length. It was not debated.

During the reading of the paper, the Chair asked liberty to interrupt the reader, which was granted, in order to ask the tellers whether they were ready to report.

DR. WILLIAMS, for the tellers, replied that they were not ready, because of a technical difficulty in regard to determining the election of a portion of the censors. If the election in this case is to be determined by a majority vote, then there were only two censors elected; but if by plurality, then there were elected a sufficient number.

The Chair decided that a plurality vote was sufficient.

Dr. Williams, under this ruling, was prepared to announce the result of the election, and did so as follows:

REPORT OF THE TELLERS.

Office.	Candidate.	Number of Votes Cast.	Necessary for Choice.	Number Received.	Result.
For President	Charles Jewett	56	29	54	Elected.
For Vice-President	G. W. Baker	52	27	24	
For “	T. W. Rockwell	52	27	28	“
For Secretary	R. M. Wyckoff	56	29	55	“
For Assistant Secretary	J. H. Hunt	53	27	44	“
For “ “	P. H. Kretzschmar	53	27	9	
For Treasurer	J. R. Vanderveer	52	27	36	“
For “	W. Wallace	52	27	16	
For Librarian	T. R. French	54	28	54	“
For Del. to S. Med. Soc.	Charles Jewett	47	24	27	“
For “ “ “	G. W. Baker	47	24	12	
For Del. Am. Med. Ass'n, entire ticket		47	24	47	“
Drs. Andrews, Armor, G. W. Baker, Bartlett, Burge, Byrne, A. S. Clarke, Crane, Corbally, Evans, Fowler, Griffiths, Hutchins, Hutchison, L. S. Pilcher, Prout, Raymond, Read, Rockwell, Rushmore, Russell, Segur, Shaw, Sherwell, Skene, Squibb, Vanderveer, Walker, B. F. Westbrook, H. F. Williams, Wyckoff.					
For Censors	G. W. Baker	56	29	19	
	I. H. Barber	56	29	16	
	G. D. Bodkin	56	29	15	
	L. C. Gray	56	29	19	
	R. Hesse	56	29	20	
	A. Hutchins	56	29	46	“
	J. D. Rushmore	56	29	28	“
	B. A. Segur	56	29	32	“
	W. H. Thayer	56	29	24	“
	B. F. Westbrook	56	29	27	“
	J. S. Wight	56	29	19	

On motion of Dr. Wyckoff the report of the Tellers was accepted as the will of the Society.

The Chair, after a short consultation with the Secretary, stated that he had labored under a misapprehension when ruling upon the question presented by the Tellers in the matter of the election of Censors. He had stated that a plurality vote was sufficient to elect; whereas the rule for the direction of the Tellers directs that "a majority of all regular ballots is necessary to elect to any office; a plurality to select delegates." Therefore only two Censors had been elected, and it would be necessary to proceed to a second ballot.

On motion of Dr. Wyckoff it was resolved that the President be empowered to cast the affirmative vote of the Society for the three candidates having the next highest number of votes, and that they be declared duly elected as Censors.

The Chair did as directed, and it was so ordered.

The reading of the paper of Dr. Hutchins, entitled "Sick-room Æsthetics for our Girls," was postponed until a future meeting.

The report of the Council for 1880 was then called for, and the Secretary was about to read, when

Dr. Hopkins, because of the lateness of the hour, moved that all reports which had not been presented, but which were expected to be presented, be received and placed on file as having been read.

The motion was seconded.

At the request of the Secretary, an exception was made in favor of the minutes of the January meeting of the Council, and the motion was adopted.

The Secretary then read the Minutes of the January meeting of the Council.

On motion of Dr. Wyckoff, the President was authorized to appoint a committee of ten to carry out the recommendations of the Council.

No amendments to the By-Laws were offered.

The Chair announced that the reports of all committees which had not reported would be received and disposed of, as per resolution.

The following reports were received under the resolution:

REPORT OF THE COMMITTEE ON PERMANENT FUND AND BUILDING.

January 18, 1881.

The Committee on Permanent Fund and Building respectfully report that they have deemed it inexpedient, after a slight canvass, early in the year, to attempt to raise money to a sufficient amount to purchase a building for the Society. While "times" are improving and money is easier, we think that a year or so hence would be a more favorable time to accomplish this object. The value of the Library is increasing, and its demands for room in a few years will be so great, we hope, as to necessitate the purchase of a building of our own.

Then, furthermore, we learn from the Treasurer that the Treasury is overdrawn, and that there is hardly income sufficient to meet the demand made upon it this year—notwithstanding a $5 assessment very closely collected—as the Society has devoted so much more money than usual for special purposes, that the Treasurer has been unable to add the $200 to the Permanent Fund, as directed by the Society.

The Committee would therefore ask a continuance of its powers, that it may be prepared to act when circumstances seem to warrant it.

Respectfully submitted for the Committee,

GEO. G. HOPKINS, *Chairman.*

Dr. Hutchins announced that the Treasurer had lately come into possession of the accounts of a former Treasurer of this Society for the years 1820 to 1830, by which it appears that the initiation fee was $10.

The Chair announced the death of Dr. Elmendorf.

The Chair asked whether the committee on the death of Dr. Sanford were ready to report.

Dr. Wilbur F. Sanford was born at Riverhead, Long Island, on May 21st, 1845, and was, therefore, 36 years of age at the time of his death. He came of a Puritan strain, being a direct descendant, on the paternal side, of Thomas Sanford, who settled in Milford, Conn., in 1639; whilst his maternal ancestors figure in the early colonial history of Westchester County, N. Y. His father was a Methodist minister. His early educational training was good, and it enabled him to enter the freshman class of Wesleyan University in 1860, although only 14 years old. A brother's illness kept him at home one year, and he did not graduate until 1865, the youngest member of his class but one—that one being Prof. Rice, now a member of the collegiate faculty. He entered the office of Dr. Baker, of Middletown, Conn., at once, and listened to his first course of medical lectures at the College of Physicians and Surgeons in the winter of 1865. In 1867 he graduated from the New York University, and then spent the ensuing year in Europe, principally in Vienna. In 1868 he began the practice of medicine in Greenpoint, and was successful almost from the start. As time went on, however, it became evident that he was not equal to all the harassing details of a general practice—the nocturnal work, the irregular meals, the taunting worry of the constant battle with disease and death, the never-ceasing strain on mind and body, were seen to be sapping his strength, as it has sapped the strength of many a more robust man before him. When he became aware of the fact, he determined to become a lawyer, in the belief that clients are more easily served than patients. So, in 1875, he again took up his career as a student—this time of the law, and soon abandoned his medical work. Two years later he graduated from the Columbia Law School, and with honors. At this period of his life he was married to Miss Miriam Boyce. There was certainly a seeming, at this time, of a bright future before Dr. Sanford. Happily married, possessing a well-stored mind, master of two professions, enjoying the confidence and the affection of the community, standing with renewed health in the flush of life, he must certainly have looked forward with the hope that is begotten of confidence. But he had not yet entered the shadow of the trials of life. They were soon upon him. By a sudden misfortune—such as was unavoidable—he was stripped of his means, and left dependent upon his daily efforts for his subsistence. There was no resource but to resume the practice of medicine. Resume it he did, in 1879, and by resuming, doubtless wore himself out. The cause of his death was characteristic of the man. He was performing tracheotomy in a child suffering from diphtheria; the tube became clogged with mucus; he sucked it out; and, completing the operation, left his patient that was to live, and went home to die. He had been suffering from a slight tonsilitis, to which he was subject, at the time of the operation. This increased in severity; a diphtheritic exudation appeared; and, after a week of terrible suffering, death eased him.

Dr. Sanford needs no words of eulogy, such as are conventional in an obituary notice. The compliment that was paid him in making him Lecturer on Medical Jurisprudence at Long Island College, the resolutions of respect that have lately been passed by the Medico-Legal Society of New York, the memorial services that have been held in his honor, all these were slight tributes to the man who richly deserved much more. Let those who knew him add to their memory of his mental and personal qualities the simple details of his life as given above, and it will be all the honor his memory needs. He was of the race of the Progressists. He believed that it was possible for a man to do better on the morrow than he had done yesterday, and his courage walked side by side with his opinions. Withal, he was unassuming, an intellectual and a conventional gentleman. His mind was a fine one; it had a stout fibre, and it was well trained, and those who have listened to his clear voice ring through this hall, resonant with conviction, may be pardoned for believing that the medical profession of our county has sustained a serious loss in the death of Dr. Sanford.

L. C. GRAY,
R. E. VAN GIESEN. } *Committee.*
J. A. JENKINS.

DR. J. H. HUNT called attention to various instruments, a microscope, etc., which had belonged to Dr. Elmendorf, and which had been left in the reading-room, for sale. He hoped those in need of these articles would avail themselves of the opportunity offered to purchase.

There being no more business, on motion the Society adjourned.

Ἀσκληπιὸς

ʽο Σωτὴρ

Χαρμα μέγ' ανθρωποισι, κακων θελκτῆρ' οδυναων.

Hymns of Homer, No. XVI.

PROLIFERATIONS.

——WHOOPING COUGH.—Dr. Lee, of Baltimore, uses atropia hypodermically—four grains to the ounce—the injection being one minim or more, according to age, in ten minims of water. He gives it as early in the morning as possible, and repeats at bedtime if needed. He also carbolizes the air about the patient's bed by means of strips of Canton flannel, steeped in a five per cent. solution of the best crystals of carbolic acid.

——THE MICROSCOPE AND OBJECTIVES of the late Dr. Elmendorf are for sale at the Rooms. Dr. Segur, in a note, states that these objectives were made and selected from his products by the eminent objective maker, Mr. Wales, to the order of the late Dr. Elmendorf, and are, therefore, the best examples of his skill and work.

——THE AMERICAN MEDICAL BI-WEEKLY.—This journal, which was formerly published in Louisville, Ky., and which had nearly reached the close of the eleventh volume, when the severe and protracted illness of the editor compelled its temporary discontinuance, is now, on his entire recovery, restored to its position among the medical journals of this country. The editor, Dr. E. S. Gaillard, having made his home in New York, the Bi-Weekly is now published there. The first number of volume twelve has been received. It is now a double-column medical journal, larger than the old Bi-Weekly, and is published at $1.00 a year; the former terms being $3.00. The Bi-Weekly is with pleasure again placed upon the exchange list. Its address is Box 1,124, N. Y. City.

——A State Medical Examining Board should alone grant licenses to practice medicine in this State, and this new departure will occur when sufficient interest is felt in regard to medical reform. By requiring all candidates to pass well in all matters that are common to each of the sects, this will do much towards killing off medical sectarianism. The person who can pass well in anatomy, physiology, chemistry, histology and pathology, in the widest sense of this term, will very surely have at his command, or readily acquire, a system of therapeutics that commends itself to his intelligence. The examinations in obstetrics and surgery should go over the whole ground occupied by them, except where sectarian differences as to treatment interpose. Men talk of the *science* of medicine—the word means, among other things, "the investigation of *truth* for its own sake," "*truth* ascertained," "*true* knowledge." May scientific truth prevail, should be our most earnest wish. Only error fears the truth. It is impossible, therefore, for the writer to understand how a man, who is sincere in his convictions as to the truth of the principles of regular medicines, and, at the same time, thoroughly *honest with himself* as to his convictions, can ask or desire more of his competitors than this enforced equality, without exposing himself to the suspicion that a fair trial of opposing theories is not what he has most at heart. Except on one point all must come up to his standard, and he would no longer be under the painful necessity of ascribing differences of opinion to insufficient education. The schools have no chartered rights that would prevent the adoption of this plan, or the law passed by the last legislature forbidding their graduates to practice, except under certain specified conditions as to registration, could not stand. J. S. P——.

——The Training School for Nurses in connection with the Brooklyn City Hospital was opened Nov. 1st, 1880, by a superintendent and seven (7) nurses, the superintendent and two (2) head nurses being graduates of the Bellevue Hospital Training School for Nurses, New York. The officers of the Society of the Training School for Nurses are: President, Mrs. A. J. Perry, 30 First Place; Vice-President, Mrs. C. L. Mitchell, 129 Montague Street; Secretary, Miss D. B. Robinson, 308 Greene Avenue; Treasurer, Mr. William G. Low, 58 Remsen Street; Assistant Treasurer, Mrs. C. T. Pierce, 41 Tompkins Place; Superintendent, Miss Pine. Communications on the subjects of nurses may be made personally, or by letter, to the Superintendent of the Training School, 257 Adelphi Street, or Brooklyn City Hospital.

——The Regular Monthly Meetings of the Medical Society of the County of Kings are held at 8 P.M. on the third Tuesday of each month, at Everett Hall, 398 Fulton Street.

The February meeting will be held on the 15th, at which the following papers will be presented:

Therapeutic Hints Based Upon Certain Arrested or Perverted Physiological Processes, by Dr. J. A. McCorkle.

Immediate Treatment of Lacerated Perineum, by Dr. F. A. Stuart.

MEDICAL SOCIETY OF THE COUNTY OF KINGS

OFFICERS AND COMMITTEES FOR 1881.

President	C. Jewett, M.D., 307 Gates Ave.
Vice-President	F. W. Rockwell, M.D., 6 Lafayette Ave.
Secretary	R. M. Wyckoff, M.D., 532 Clinton Ave.
Assistant-Secretary	J. H. Hunt, M.D., 419 Hart St.
Treasurer	J. R. Vanderveer, M.D., 301 Carlton Ave.
Librarian	T. R. French, M.D., 469 Clinton Ave.

CENSORS.

B. A. Segur, M.D., 281 Henry St.
A. Hutchins, M.D., 796 De Kalb Ave.
B. F. Westbrook. M.D., 174 Clinton St.
W. H. Thayer, M.D., 171 Livingston St.
J. D. Rushmore, M.D., 129 Montague St.

DELEGATES TO THE MEDICAL SOCIETY OF THE STATE OF NEW YORK.

(1878 to 1882.)

Drs. J. C. Shaw,
J. D. Rushmore,
C. Jewett,
A. Otterson,
Drs. G. G. Hopkins,
J. S. Wight,
A. Sherwell,
W. Wallace,
Drs. J. Byrne,
B. F. Westbrook,
E. N. Chapman,
F. W. Rockwell.

Chap. XI., Art. 2, of By-laws: "Any Member elected as Delegate to the Medical Society of the State of New York, who shall be unable to act as Delegate during two successive years, shall be considered to have vacated his position as Delegate."

DELEGATES TO THE AMERICAN MEDICAL ASSOCIATION.

Drs. Andrews,
Armor,
G. W. Baker,
Bartlett,
Burge,
Byrne,
A. S. Clarke,
Crane,
Corbally,
Evans,
Drs. Fowler,
Griffiths,
Hutchins,
Hutchison,
L. S. Pilcher,
Prout,
Raymond,
Read,
Rockwell,
Rushmore,
Russell,
Drs. Segur,
Shaw,
Sherwell,
Skene,
Squibb,
Vanderveer,
Walker,
B. F. Westbrook,
H. F. Williams,
Wyckoff.

COMMITTEES OF THE SOCIETY.

HYGIENE.

Drs. J. Walker,
B. Edson,
N. B. Sizer.

REGISTRATION.

Drs. W. E. Griffiths,
A. S. Clarke,
J. A. Jenkins,
Drs. W. G. Russell,
N. Matson,
F. W. Rockwell,
Dr. R. M. Buell.

PHYSICIANS' MUTUAL AID ASSOCIATION.

Drs. B. A. Segur,
J. H. Barber,
W. W. Reese,
J. H. H. Burge,
A. W. Catlin.
A. Hutchins,
W. G. Russell,

MEDICAL SOCIETY OF THE COUNTY OF KINGS.

OFFICERS FOR 1881.

President......................C. Jewett, M.D., 310 Gates Av.
Vice President..................F. W. Rockwell, M.D., 6 Lafayette Av.
Secretary...................R. M. Wyckoff, M.D., 532 Clinton Av.
Assistant Secretary.............J. H. Hunt, M.D., 419 Hart St.
Treasurer......................J. R. Vanderveer, M.D., 301 Carlton Av.
Librarian.....................T. R. French, M.D., 469 Clinton Av.

CENSORS.

B. A. Segur, M.D., A. Hutchins, M.D., J. D. Rushmore, M.D.,
W. H. Thayer, M.D., B. F. Westbrook, M.D.

ACTIVE MEMBERS.

Drs. Ambrose, D.
Anderson, Wm.
Andrews, J. S.
Armor, S. G.
Arnold, J. A.
Atkinson, G. H.
Ayres, Benj.
Baker, G. W.
Baker, R. C.
Baldwin, N. A.
Ball, Jno.
Barber, J. H.
Bartlett, H. L.
Bates, W. H.
Beardsley, W. E.
Bell, L. T.
Bennett, W. H.
Bird, J. R.
Bliss, W. A.
Bodkin, D. G.
Bowron, F. W.
Brady, S. J.
Breen, M.
Briggs, B. M.
Bristow, A. T.
Brodie, J. A.
Brush, G. W.
Buell, R. M.
Bunker, E. S.
Burge, J. H. H.
Burns, A. M.
Byrne, Jno.
Caemmerer, W. H.
Campbell, A.
Candidus, P.
Cardwell, G. A.
Corolan, E. J.
Carpenter, E. W.
Carreau, J. A.
Catlin, A. W.
Chace, D. E.
Chase, W. B.
Chapman, E. N.
Childs, S. B.

Drs. Church, S.
Clark, Chas. F.
Clark, J. E.
Clarke, Alex. S.
Cochran, Alex.
Colgan, J. P.
Colton, E. G.
Colton, F. H.
Conkling, J. T.
Conroy, W. E.
Cook, C. D.
Cooper, John.
Corbally, T. P.
Corbin, Job.
Corcoran, J. J.
Corey, Chas.
Coverley, J. H.
Crane, Jas.
Creamer, Jos.
Crutchley, W. F.
Curry, A. M.
Cushing, G. W.
Cutter, G. R.
Daly, Guy F.
Davidson, R. T.
De Bowes, T. N.
De La Vergne, C. E.
De Long, W. A.
De Mund, F. C.
Dodge, D. A.
Dower, A. J.
Drury, Geo.
Dudley, W. H.
Eddy, Chas.
Edson, Benj.
Emery, Z. T.
Ensell, J. E.
Eskens, F.
Evans, Geo. A.
Farrar, J. N.
Fearn, Herbert.
Feeley, J. F.
Fessenden, B. F.
Figueira, M.

Drs. Fisk, S. N.
Fletcher, Geo.
Ford, A. W.
Ford, C. W.
Ford, Nathaniel.
Fowler, G. R.
Freeman, J. N.
French, T. R.
Frickenstein, T.
Fuhs, J.
Fuller, S. E.
Furgang, Albert.
Gallaher, Thos.
Gilfillan, Wm.
Gilfillan, Wm. J.
Gillette, F. B.
Gleavy, J. J.
Goodwin, Francis
Gray, L. C.
Gregory, J. E.
Griffiths, W. E.
Griffin, J.
Griffing, G. P.
Griggs, S. C.
Hallam, A. C.
Halsey, J. C.
Harcourt, J. M.
Hardrich, H.
Harlin, W. H.
Harrigan, J.
Harvey, E. J.
Haslett, Audley.
Hawley, J. S.
Healey, Jos.
Henderson, A. C.
Henry, J. W.
Hesse, H. J.
Hesse, R. G.
Hewett, W. B.
Hogeboom, C. L.
Hopkins, G. G.
Houghton, A. S.
Howe, J. F.
Hoyt, F. M.

Drs. Hughes, O. J. D.
Hunt, J. H.
Hutchins, Alex.
Hutchison, J. C.
Hyde, Joel W.
Irish, L. B.
Jenkins, J. A.
Jewett, Chas.
Jewett, C. C.
Johnson, C. H.
Johnson, J. G.
Joye, Thomas.
Keller, Ferd.
Kene, J. A.
Ketcham, G. F.
King, J. S.
Krauter, J.
Kretzschmar, P. H.
Kuhn, Geo. R.
Lamadrid, J. J.
La Roe, J. G.
Leach, J. T. G.
Leary, J. B.
Leighton, N. W.
Lewis, E. A.
Lindridge, E. F.
Little, W. A.
Loewenstein, H.
Lowell, A. L.
Lung, J. B.
Madden, Frank.
Maddren, Wm.
Malone, Edw.
Mann, F. P.
Mann, C. S.
Martin, W. H.
Mason, L. D.
Mason, T. L.
Matheson, A. R.
Mathewson, A.
Matson, N.
Matson, W. B.
Matthews, H. C.
Mattison, J. B.
McClellan, C. R.
McCollom, Wm.
McCorkle, J. A.
McCosker, T.
McIlroy, S. P.
McLean, H. C.
McNaughton, Geo.
Merritt, John.
Metcalfe, E. G.
Meyer, Jos.
Meyersburg, A. G.
Mitchell, C. L.
Moore, J. Fred.
Mordough, E. F.
Morse, V.
Mulligan, E. L.
Newman, G. W.
Newton, B.
North, N. L.
Olcott, Cornelius.

Drs. Oliver, G. P.
Olmstead, S. H.
Ormiston, Robert.
Ostrander, F. W.
Ostrander, G. A.
Ostrander, J. W.
Otterson, Andrew.
Otterson, W. C.
Paine, A. R.
Palmer, Ernest.
Peck, E. F.
Pendleton, E.
Pilcher, L. S.
Pillsbury, H. H.
Pillsbury, Harriet.
Potter, C. H.
Pratt, W. H. B.
Prendergast, P. J.
Prout, J. S.
Quinn, J. R.
Rand, W. H.
Randolph, W. H.
Rappold, J. C.
Raub, J. M.
Ray, J. A.
Raymond, J. H.
Read, H. N.
Reese, W. W.
Reimer, A. F. W.
Reynolds, E.
Rhodes, R. R.
Rice, M. L.
Richardson, J. E.
Riedel, Henry.
Risch, H. F. W.
Robinson, S. C.
Rochester, T. M.
Rockwell, F. W.
Rogers, H. C.
Rooney, A. J.
Rushmore, J. D.
Russell, W. G.
Santoire, S.
Schapps, C. H.
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